

LEGEND ⊕RXX - RECEIVER SITE ⊕CAL - CALIBRATION SITE ⊕LT - LONG-TERM MEASUREMENT ⊕ST - SHORT-TERM MEASUREMENT	SFR OR S - SINGLE FAMILY RESIDENCE MFR OR M - MULTI-FAMILY RESIDENCE COMM OR C - COMMERCIAL/NO OUTDOOR USE AREA b - BENEFITED RESIDENCE ⊕HXX - IN/OUTDOOR MEASUREMENT	— — — — — - EXISTING PROPERTY WALL — — — — — - EXISTING SOUNDWALL — — — — — - PROPOSED SOUNDWALL — — — — — - REPLACEMENT IN KIND SOUNDWALL	— — — — — - RETAINING WALL — — — — — - SAFETY BARRIER — — — — — - DRAINAGE RETAINING WALL — — — — — - NON-REASONABLE SOUNDWALL
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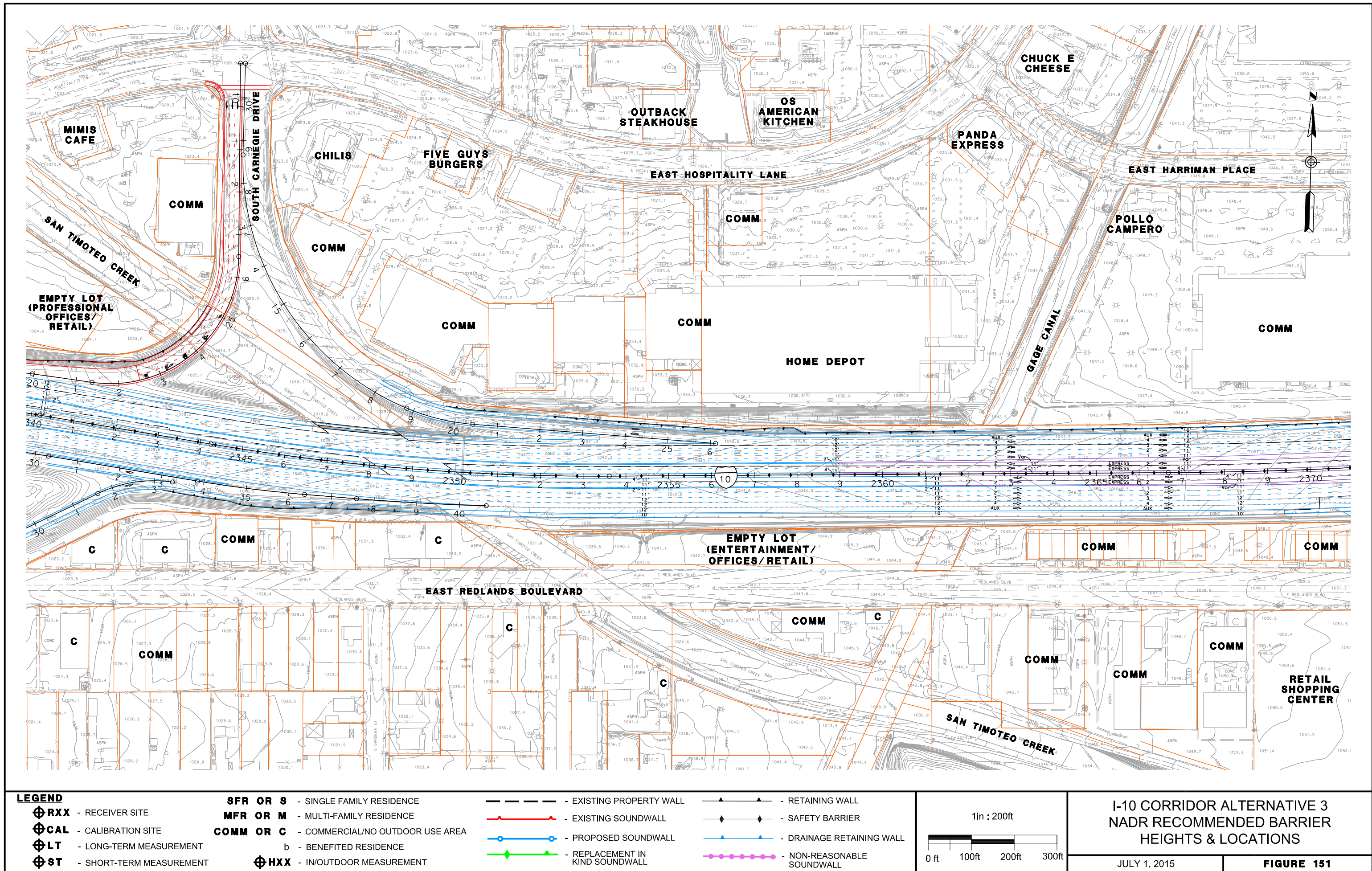
1in : 200ft

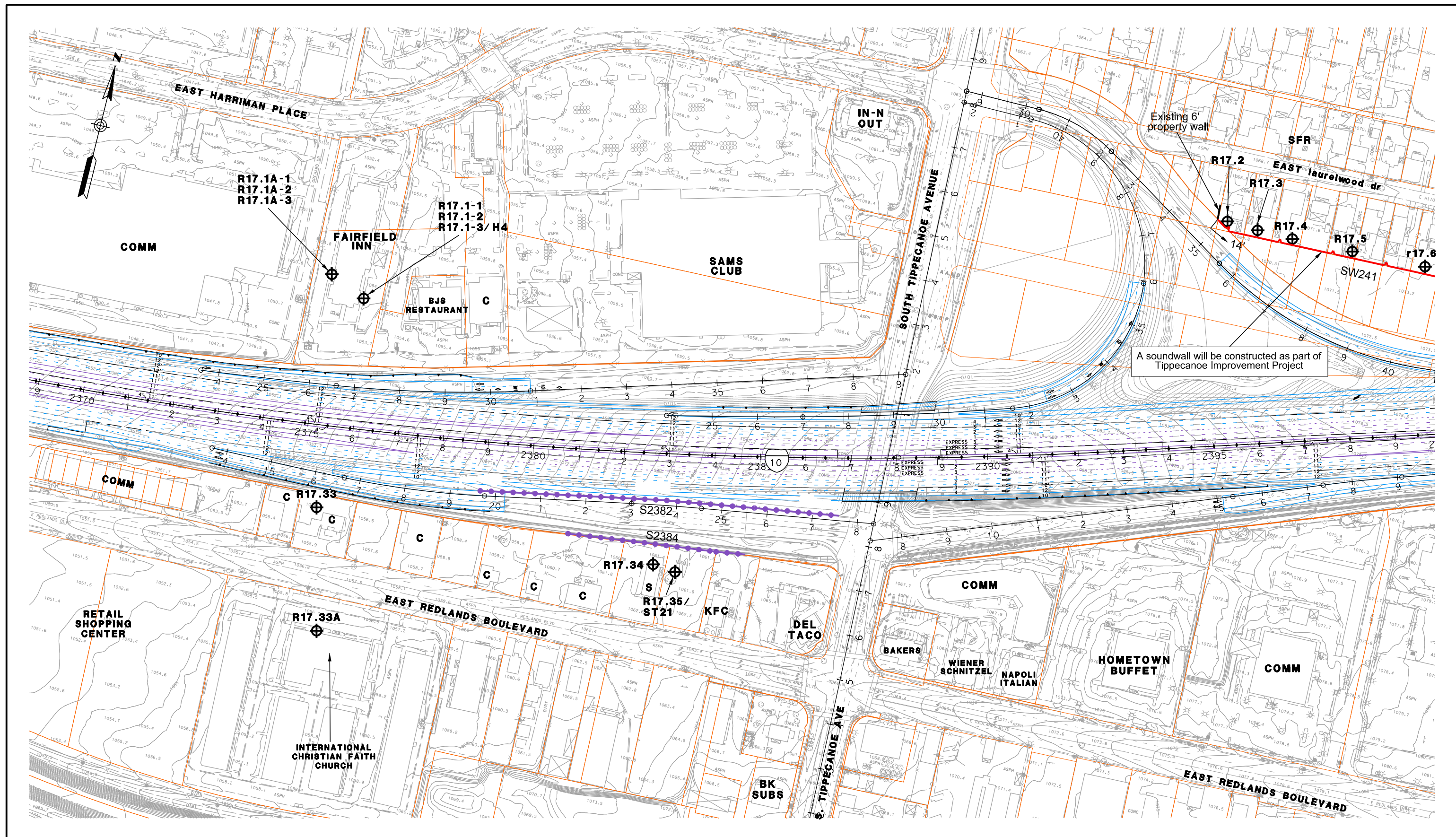
0 ft 100ft 200ft 300ft

**I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER
HEIGHTS & LOCATIONS**

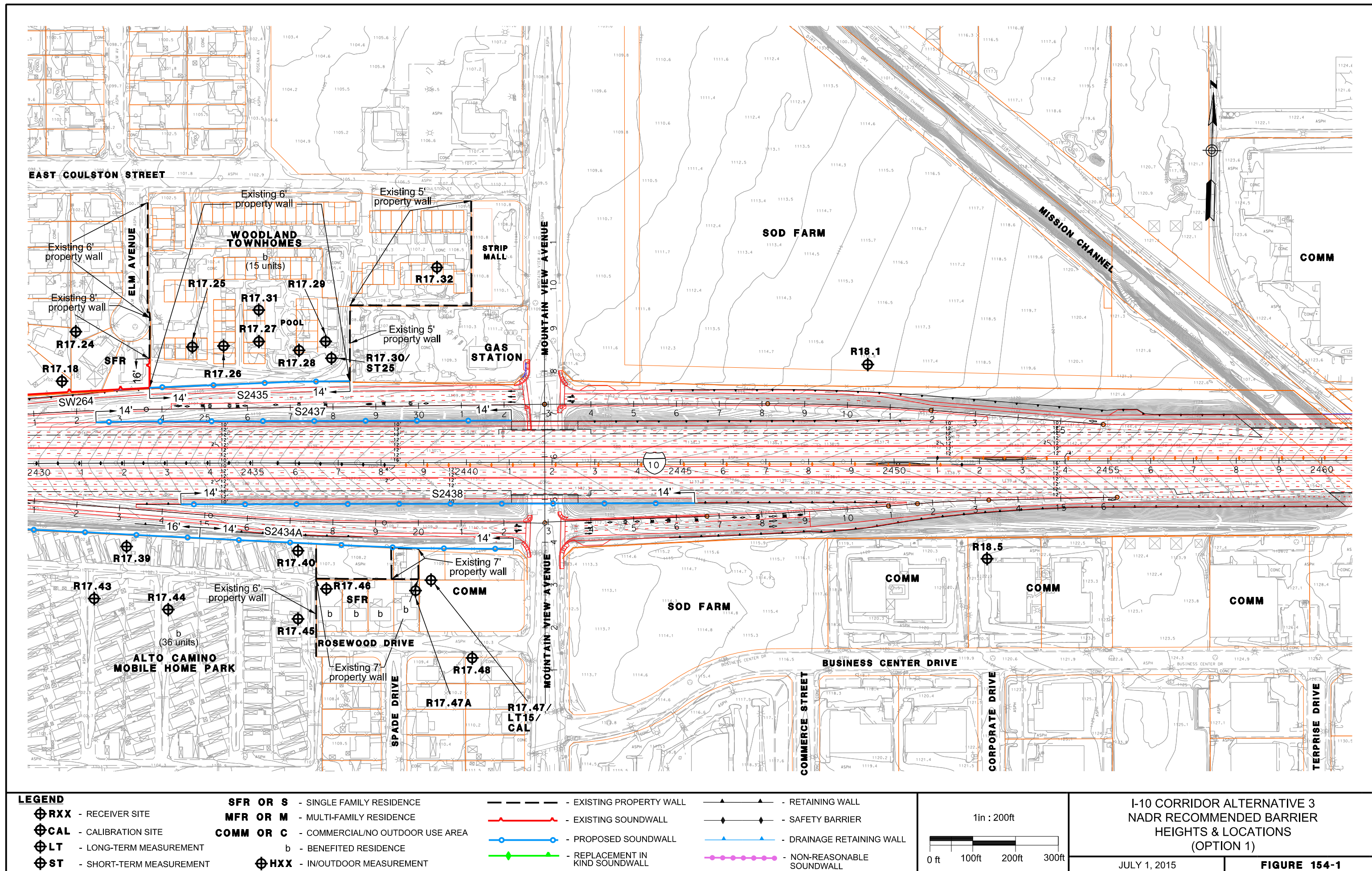
JULY 1, 2015

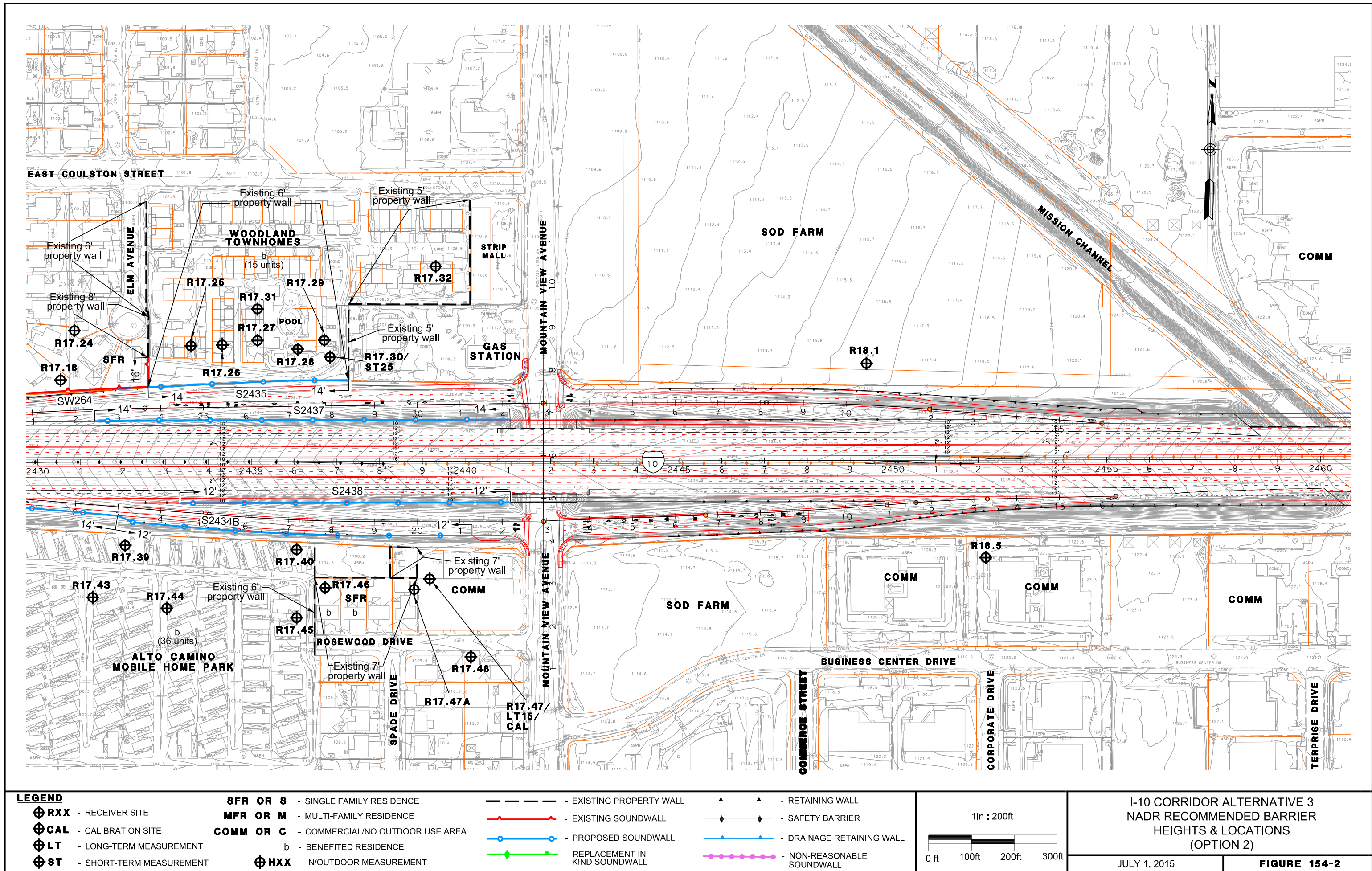
FIGURE 150

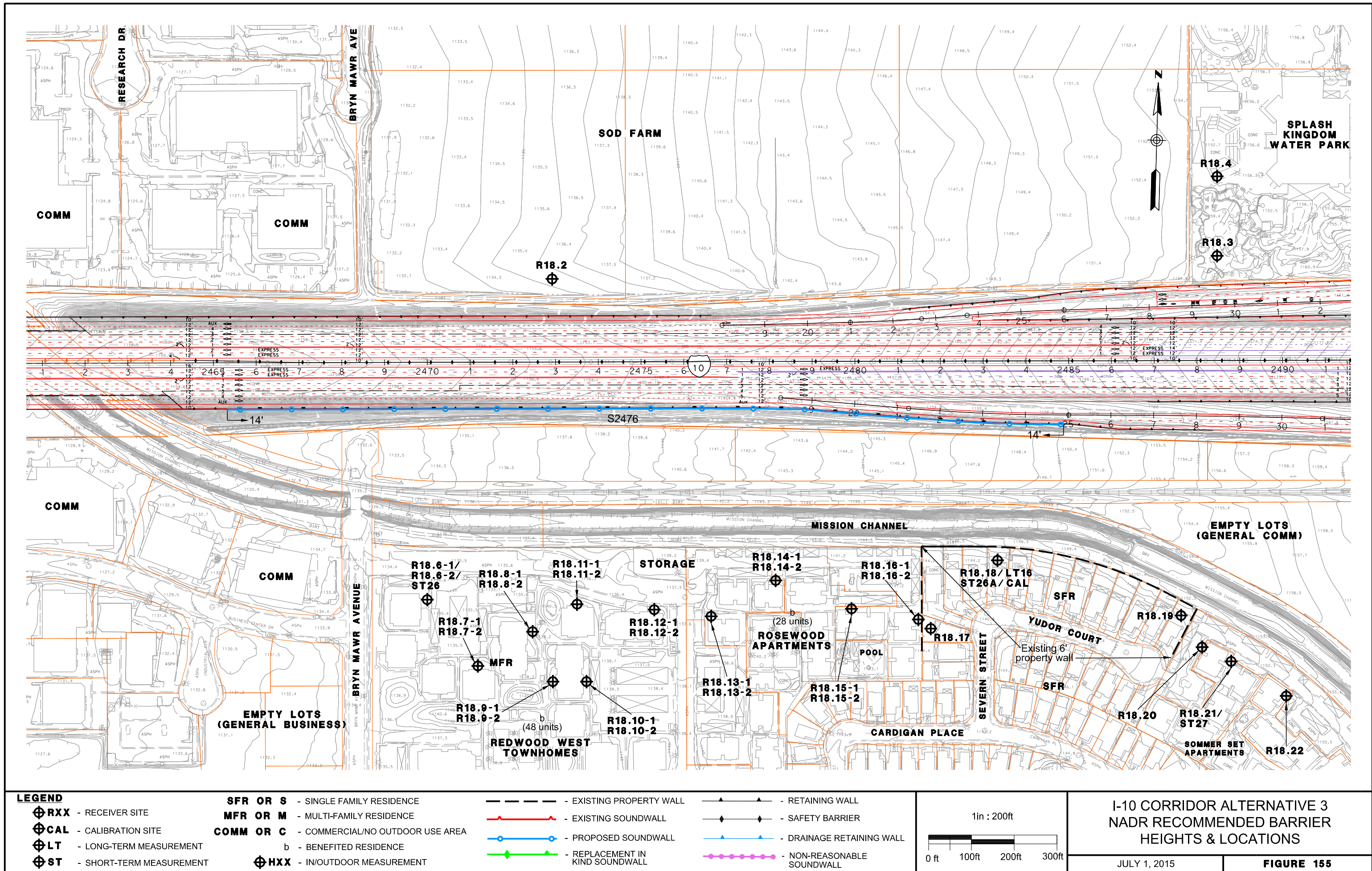


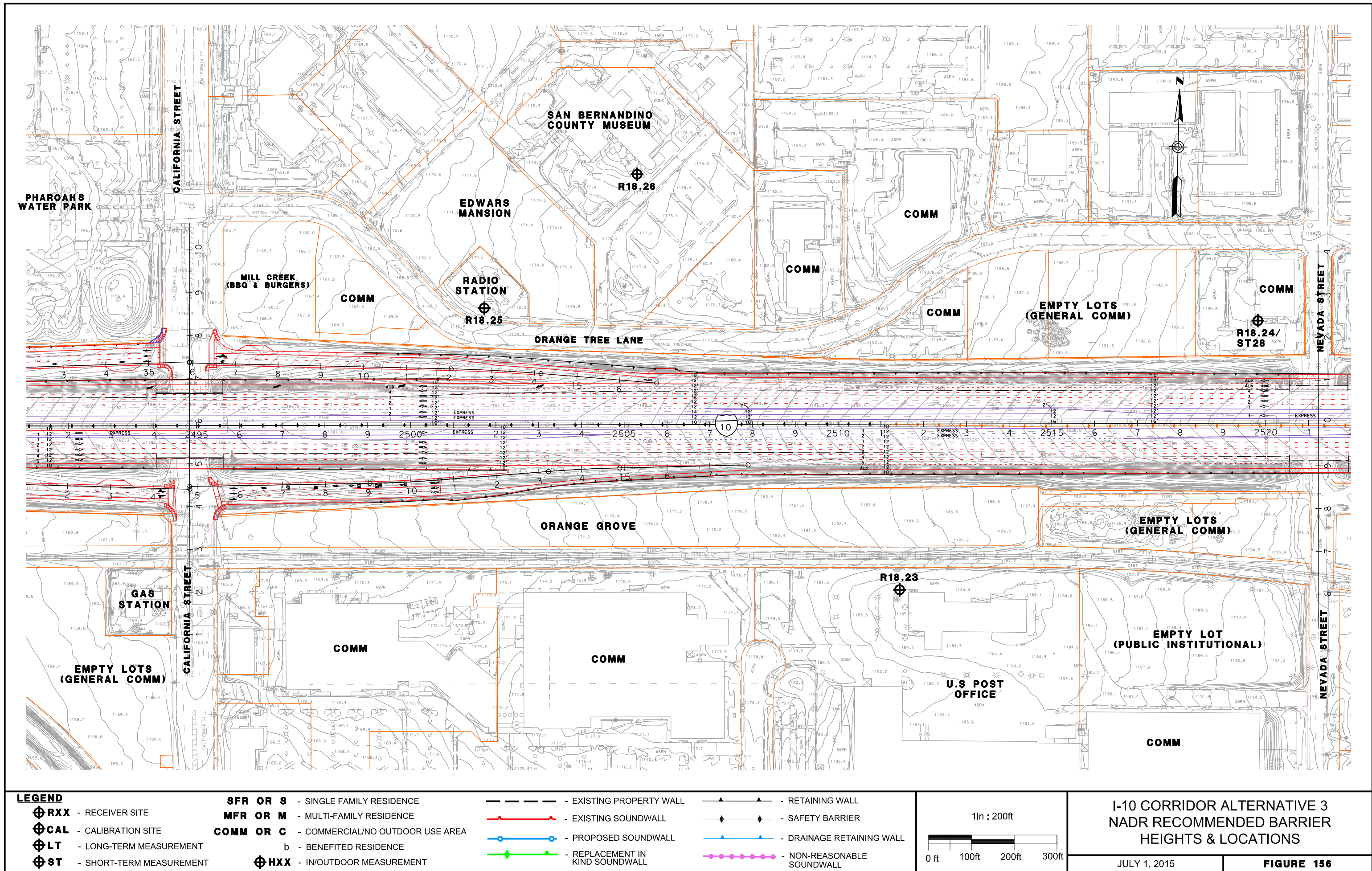


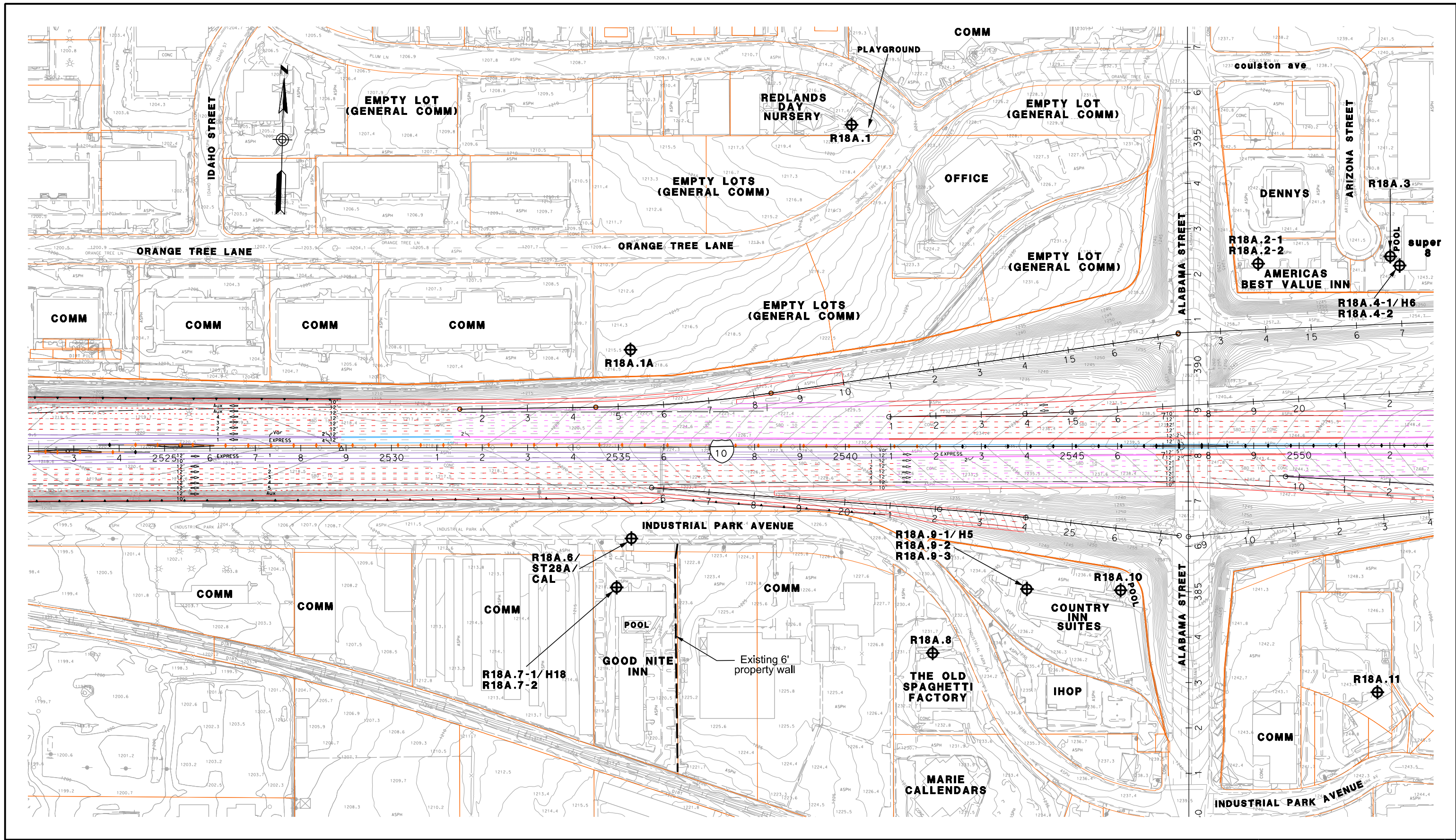
LEGEND ⊕RXX - RECEIVER SITE ⊕CAL - CALIBRATION SITE ⊕LT - LONG-TERM MEASUREMENT ⊕ST - SHORT-TERM MEASUREMENT	SFR OR S - SINGLE FAMILY RESIDENCE MFR OR M - MULTI-FAMILY RESIDENCE COMM OR C - COMMERCIAL/NO OUTDOOR USE AREA b - BENEFITED RESIDENCE ⊕HXX - IN/OUTDOOR MEASUREMENT	——— - EXISTING PROPERTY WALL ——— - EXISTING SOUNDWALL ——— - PROPOSED SOUNDWALL ——— - REPLACEMENT IN KIND SOUNDWALL	▲▲▲ - RETAINING WALL ◆◆◆ - SAFETY BARRIER ▲▲▲ - DRAINAGE RETAINING WALL ●●● - NON-REASONABLE SOUNDWALL	1in : 200ft 	<div>I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS</div> <div>JULY 1, 2015</div> <div>FIGURE 152</div>
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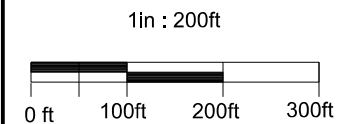
LEGEND

⊕RXX - RECEIVER SITE
⊕CAL - CALIBRATION SITE
⊕LT - LONG-TERM MEASUREMENT
⊕ST - SHORT-TERM MEASUREMENT

SFR OR S - SINGLE FAMILY RESIDENCE
MFR OR M - MULTI-FAMILY RESIDENCE
COMM OR C - COMMERCIAL/NO OUTDOOR USE AREA
b - BENEFITED RESIDENCE
⊕HXX - IN/OUTDOOR MEASUREMENT

— — — — — - EXISTING PROPERTY WALL
— — — — — - EXISTING SOUNDWALL
— — — — — - PROPOSED SOUNDWALL
— — — — — - REPLACEMENT IN KIND SOUNDWALL

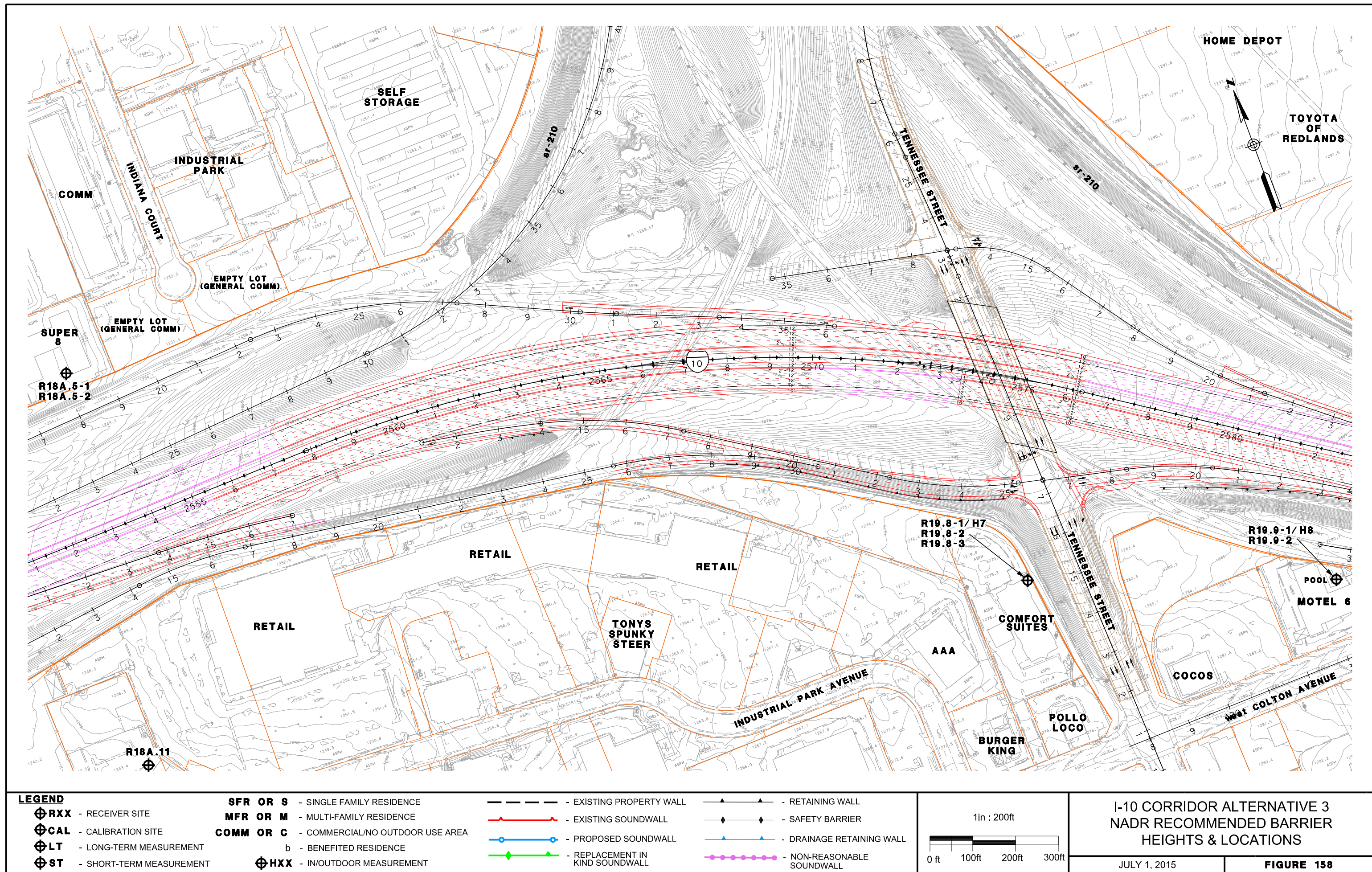
— — — — — - RETAINING WALL
— — — — — - SAFETY BARRIER
— — — — — - DRAINAGE RETAINING WALL
— — — — — - NON-REASONABLE SOUNDWALL

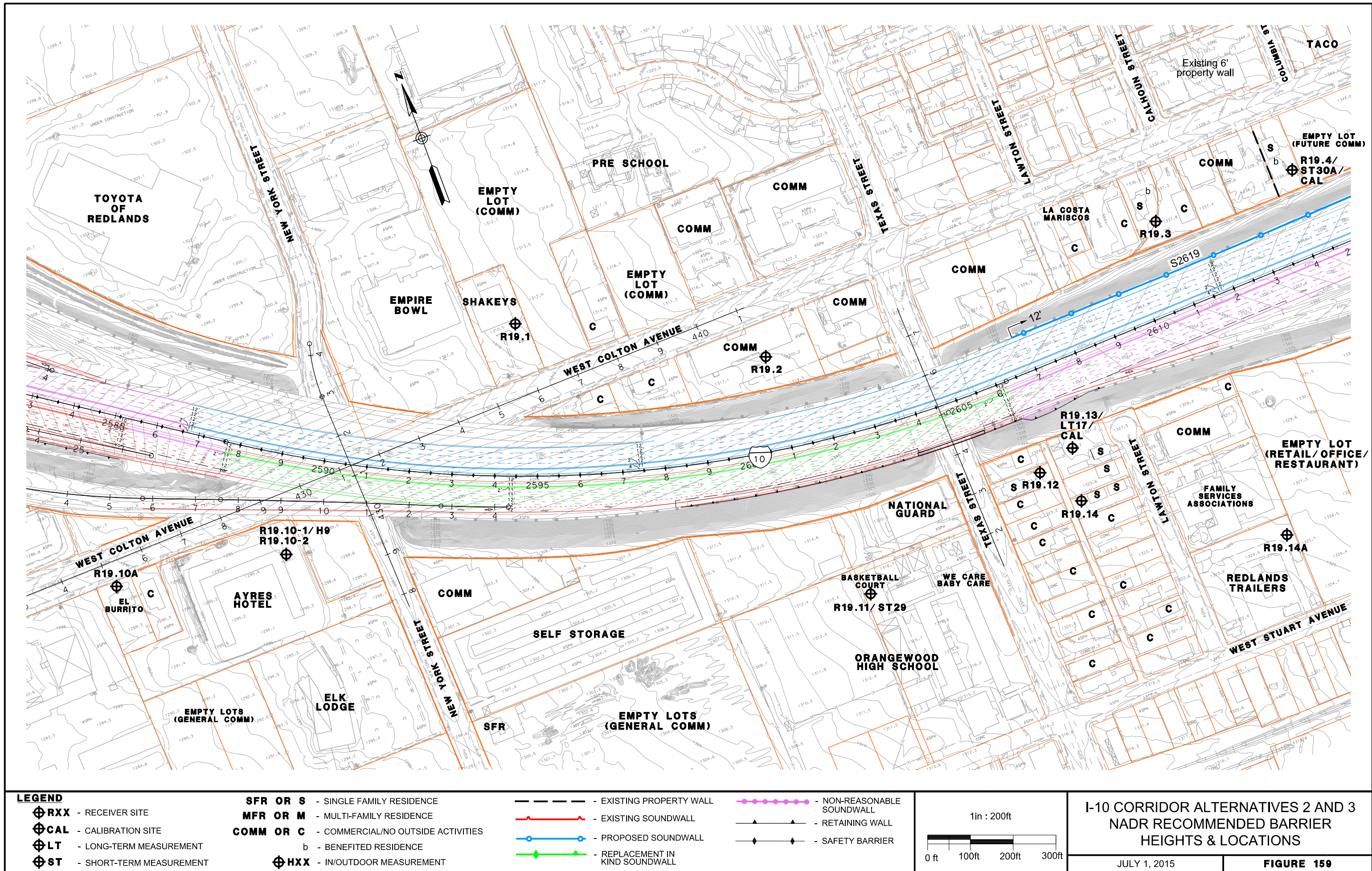


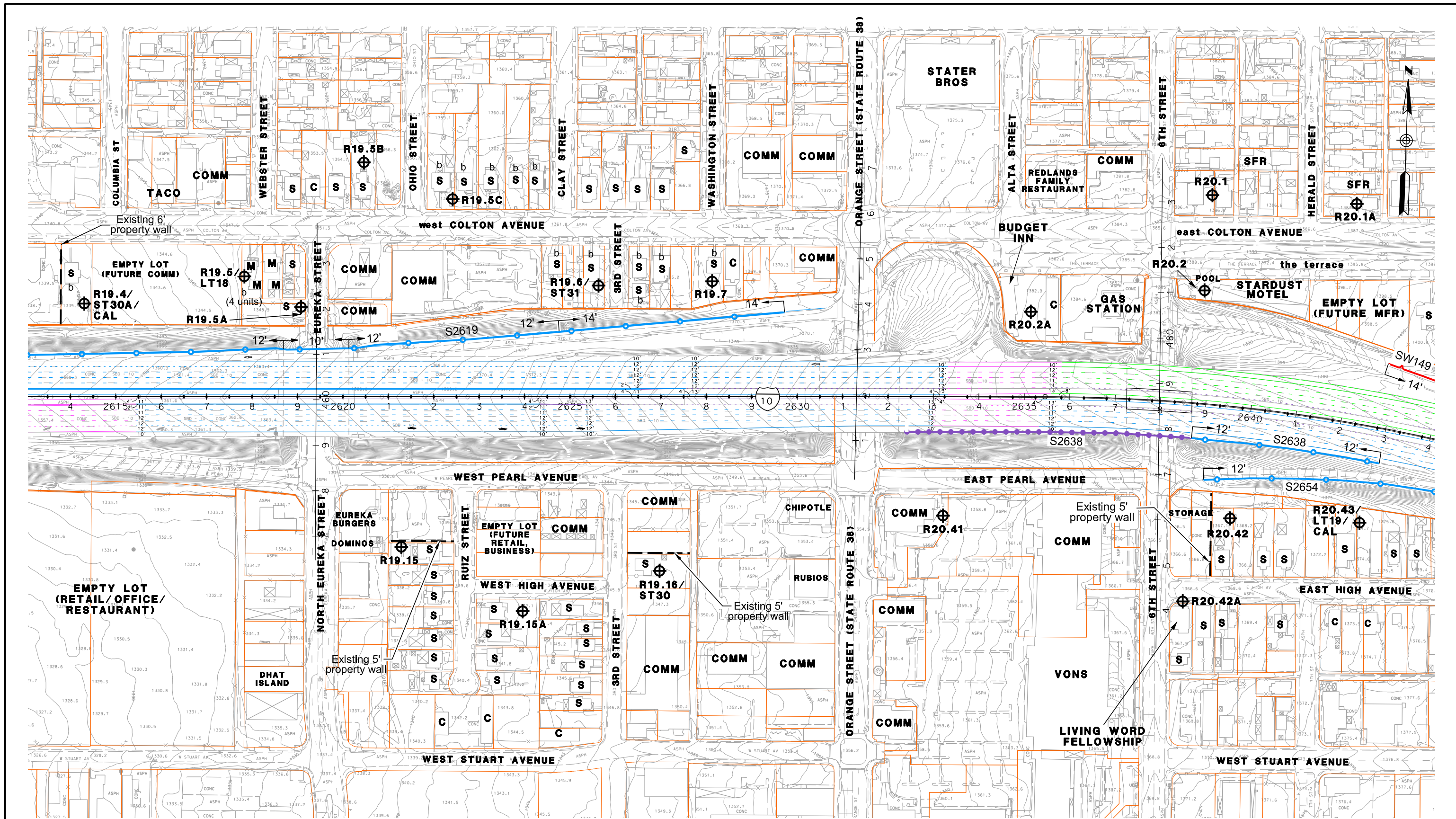
**I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER
HEIGHTS & LOCATIONS**

JULY 1, 2015

FIGURE 157







LEGEND

⊕RXX - RECEIVER SITE

⊕CAL - CALIBRATION SITE

⊕LT - LONG-TERM MEASUREMENT

⊕ST - SHORT-TERM MEASUREMENT

SFR OR S - SINGLE FAMILY RESIDENCE

MFR OR M - MULTI-FAMILY RESIDENCE

COMM OR C - COMMERCIAL/NO OUTSIDE ACTIVITIES

b - BENEFITED RESIDENCE

⊕HXX - IN/OUTDOOR MEASUREMENT

— — — — — EXISTING PROPERTY WALL

— — — — — EXISTING SOUNDWALL

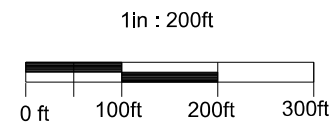
— — — — — PROPOSED SOUNDWALL

— — — — — REPLACEMENT IN KIND SOUNDWALL

— — — — — NON-REASONABLE SOUNDWALL

— — — — — RETAINING WALL

— — — — — SAFETY BARRIER



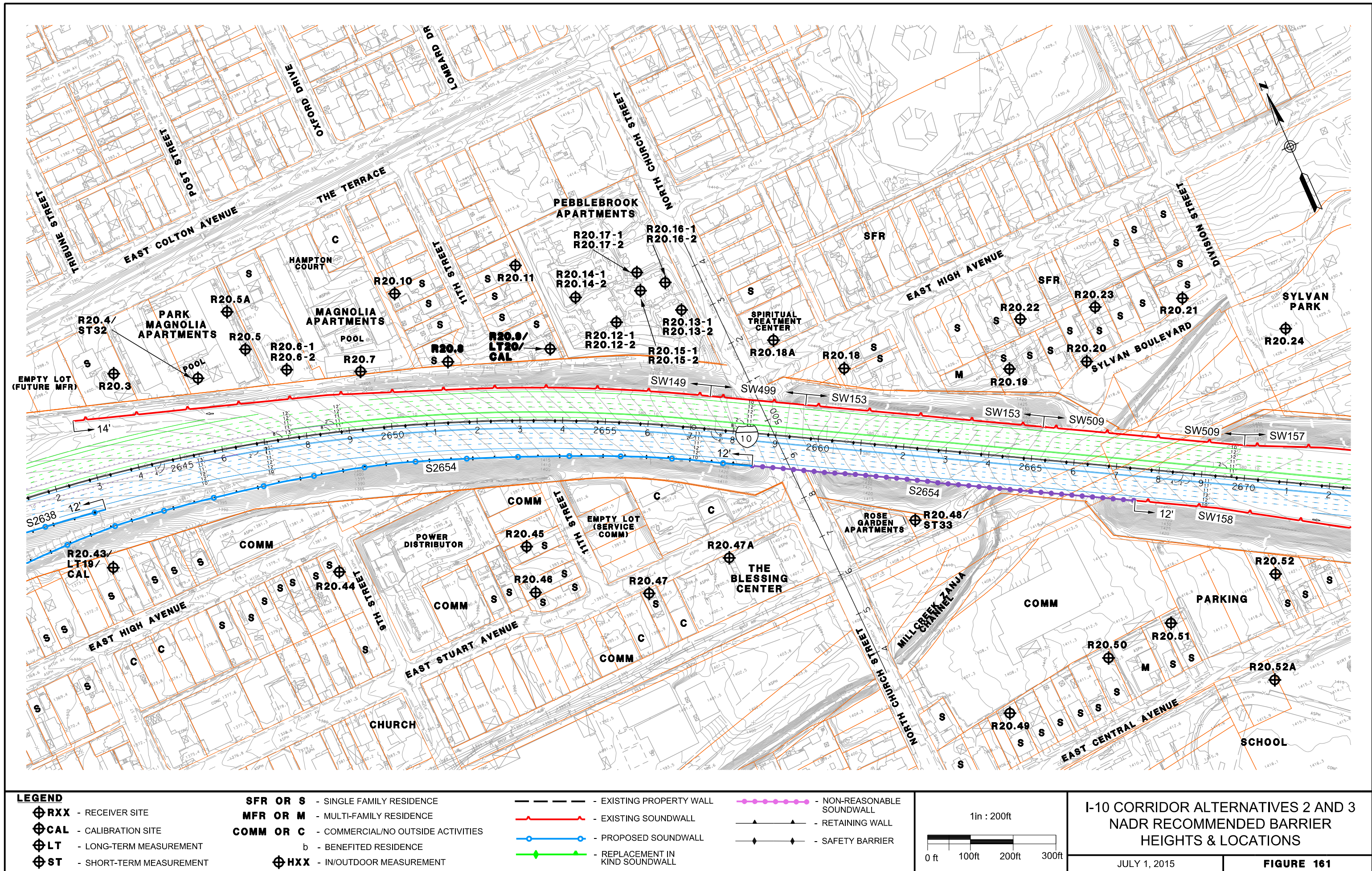
I-10 CORRIDOR ALTERNATIVES 2 AND 3

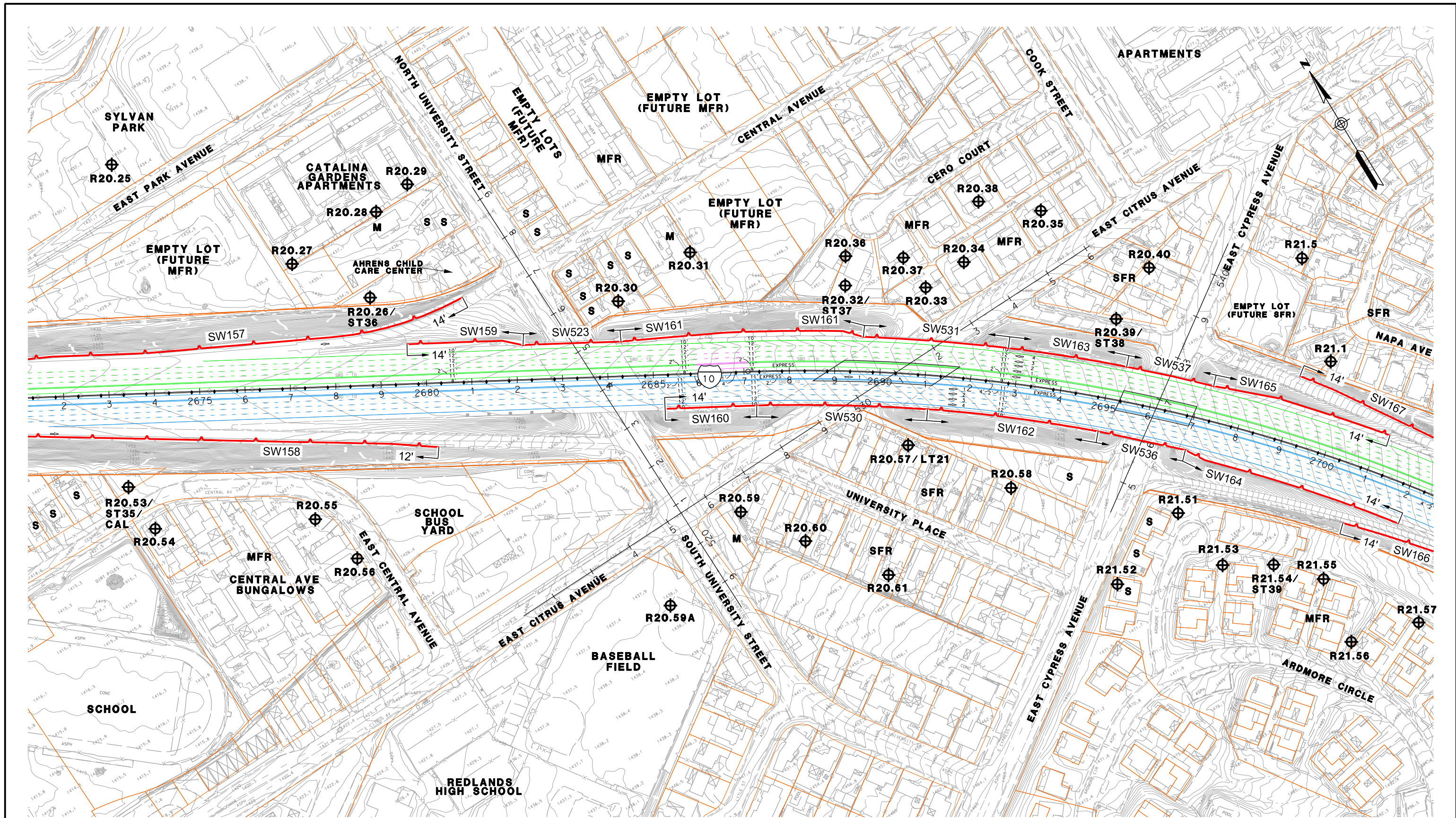
NADR RECOMMENDED BARRIER

HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 160





LEGEND

⊕RXX - RECEIVER SITE

⊕CAL - CALIBRATION SITE

⊕LT - LONG-TERM MEASUREMENT

⊕ST - SHORT-TERM MEASUREMENT

SFR OR S - SINGLE FAMILY RESIDENCE

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COMM OR C - COMMERCIAL/NO OUTSIDE ACTIVITIES

b - BENEFITED RESIDENCE

⊕HXX - IN/OUTDOOR MEASUREMENT

— — — — — EXISTING PROPERTY WALL

— — — — — EXISTING SOUNDWALL

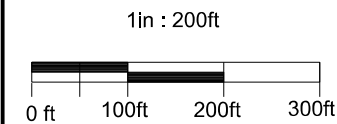
— — — — — PROPOSED SOUNDWALL

— — — — — REPLACEMENT IN KIND SOUNDWALL

— — — — — NON-REASONABLE SOUNDWALL

— — — — — RETAINING WALL

— — — — — SAFETY BARRIER



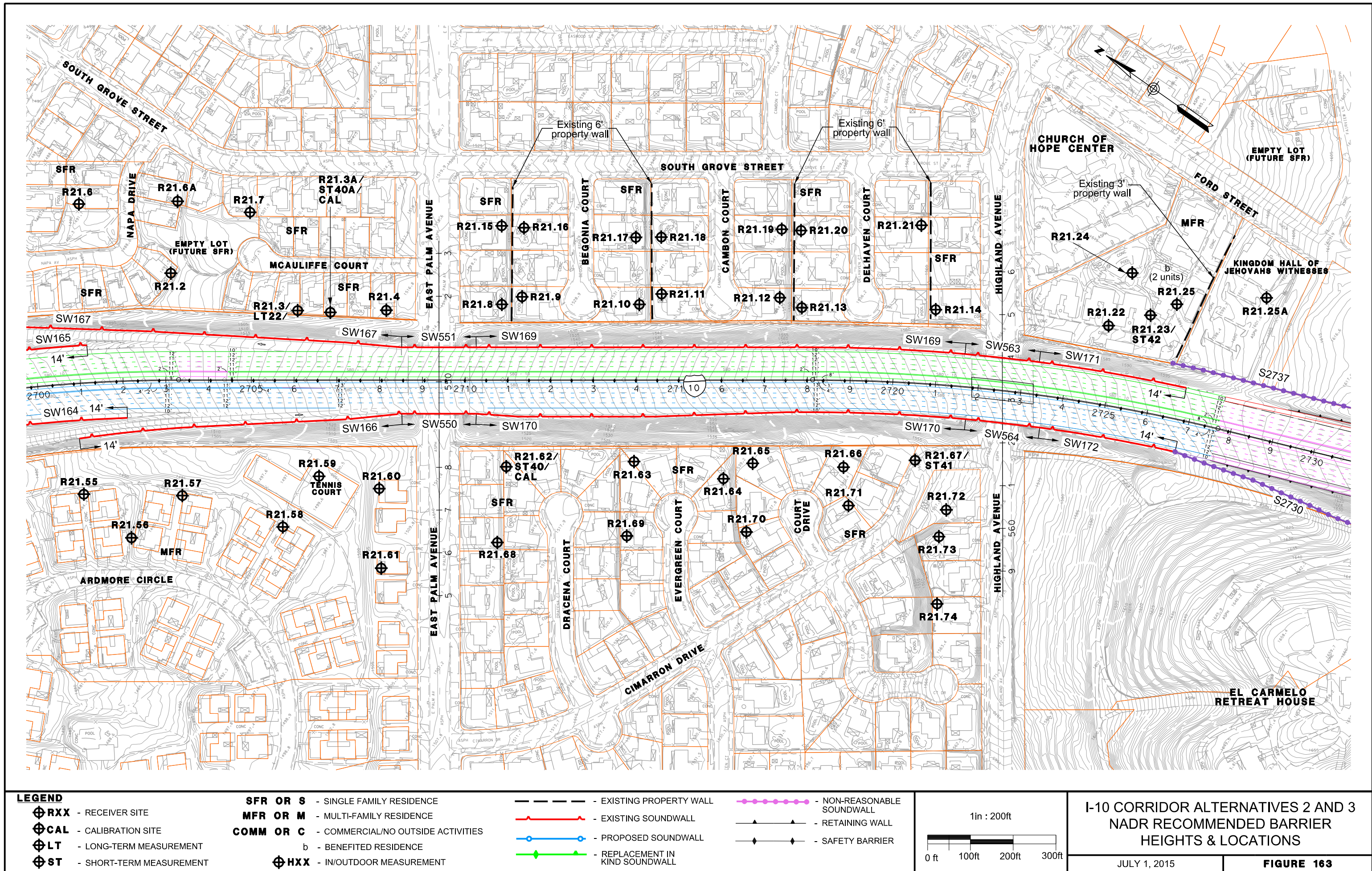
I-10 CORRIDOR ALTERNATIVES 2 AND 3

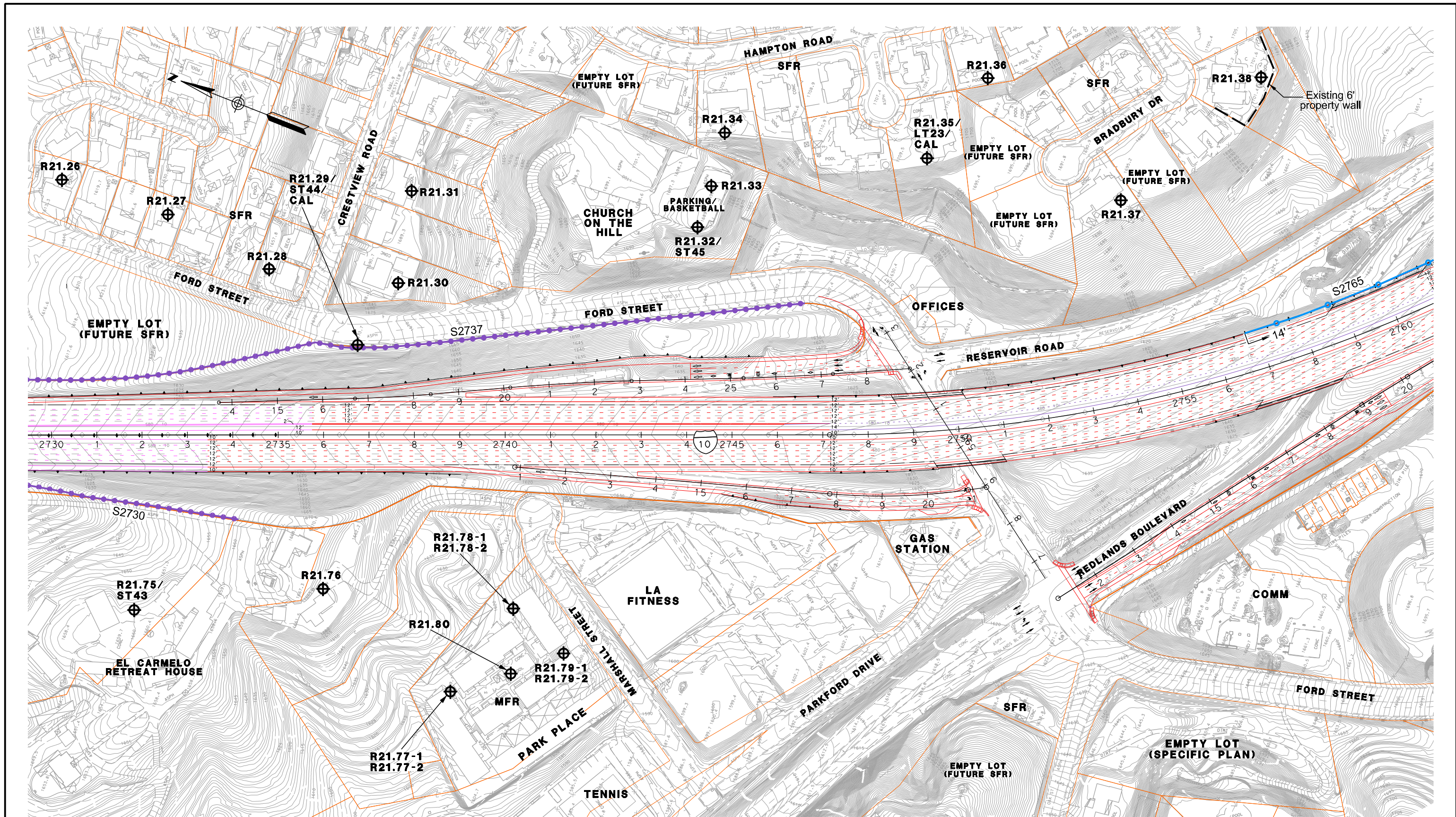
NADR RECOMMENDED BARRIER

HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 162





LEGEND

⊕**RXX** - RECEIVER SITE

⊕**CAL** - CALIBRATION SITE

⊕**LT** - LONG-TERM MEASUREMENT

⊕**ST** - SHORT-TERM MEASUREMENT

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⊕**HXX** - IN/OUTDOOR MEASUREMENT

— — — — — - EXISTING PROPERTY WALL

— — — — — - EXISTING SOUNDWALL

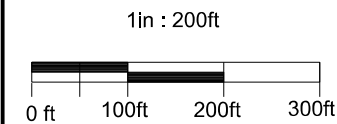
— — — — — - PROPOSED SOUNDWALL

— — — — — - REPLACEMENT IN KIND SOUNDWALL

— — — — — - NON-REASONABLE SOUNDWALL

— — — — — - RETAINING WALL

— — — — — - SAFETY BARRIER



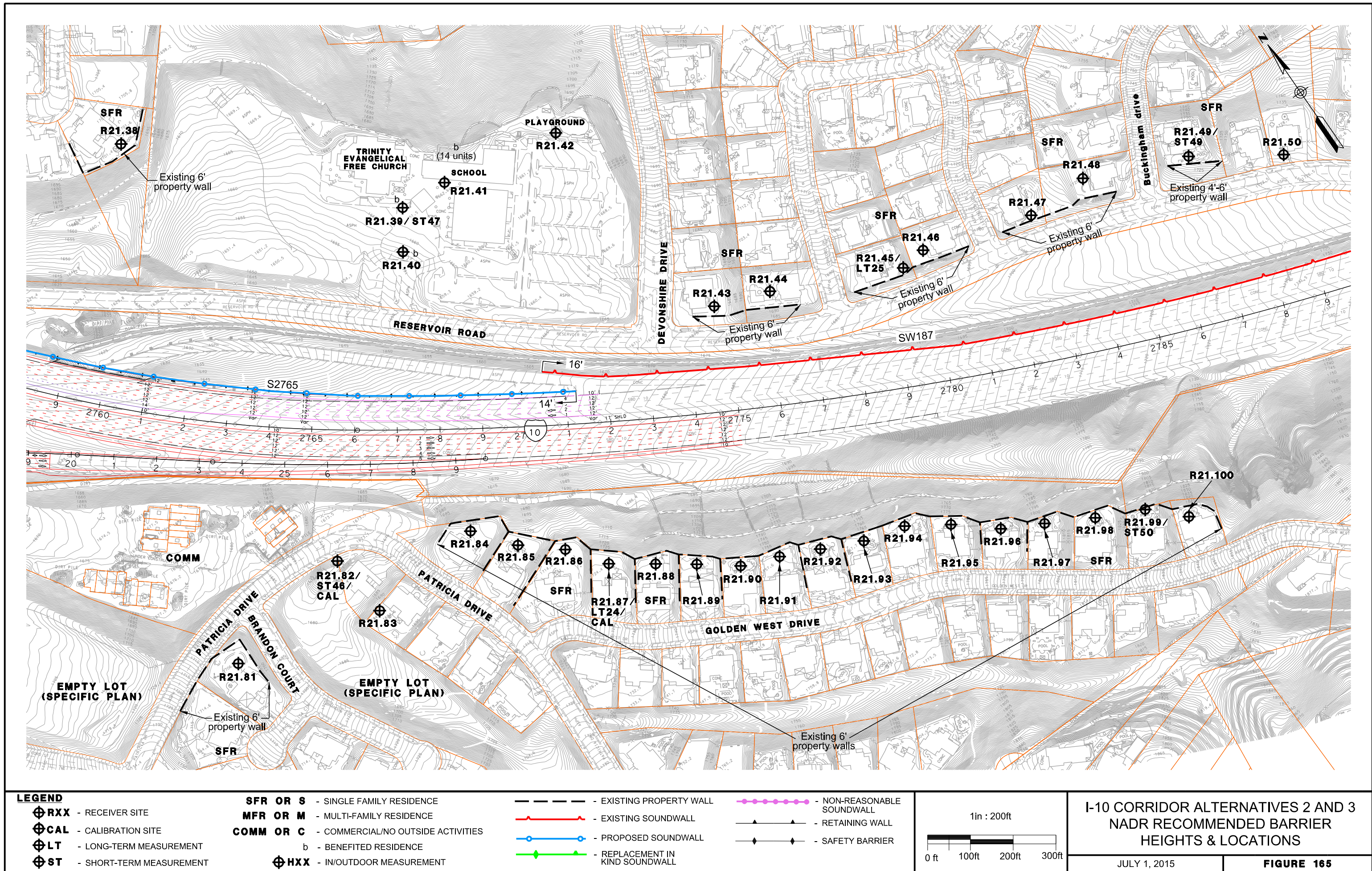
I-10 CORRIDOR ALTERNATIVES 2 AND 3

NADR RECOMMENDED BARRIER

HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 164



Appendix C Alternative 2 – Cost Analysis

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	207

Location: I-10 channel North of freeway between Cherry Ave and Citrus Ave
Station: 1749+00.00

		Cost Estimate for Barrier S1749 (Alternative #2)									
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		14	14	15	17	18	20	22	24	27	Varies
Total Pile Length (ft)		118	139	170	195	219	248	282	324	376	139
Pile cost (Drill & Cast)	\$50/LF	\$5,920.52	\$6,965.31	\$8,505.78	\$9,725.90	\$10,944.50	\$12,380.11	\$14,097.85	\$16,191.75	\$18,802.88	\$6,965.31
Sound Wall Area (SQFT)		1655	2069	2483	2896	3310	3724	4138	4552	4965	2069
Masonry Cost ²	\$17/SQFT	\$28,137.04	\$35,171.30	\$42,205.56	\$49,239.82	\$56,274.08	\$63,308.34	\$70,342.60	\$77,376.86	\$84,411.12	\$35,171.30
Pile Cap (CY)		20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1
Structure Conc. Cost	\$650/CY	\$13,074.30	\$13,074.30	\$13,074.30	\$13,074.30	\$13,074.30	\$13,074.30	\$13,074.30	\$13,074.30	\$13,074.30	\$13,074.30
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1
Structure Excavation Cost	\$65/CY	\$1,307.43	\$1,307.43	\$1,307.43	\$1,307.43	\$1,307.43	\$1,307.43	\$1,307.43	\$1,307.43	\$1,307.43	\$1,307.43
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$48,439.28	\$56,518.34	\$65,093.07	\$73,347.45	\$81,600.31	\$90,070.18	\$98,822.18	\$107,950.34	\$117,595.72	\$56,518.34
Traffic Control	\$11/LF	\$3,375.79	\$3,375.79	\$3,375.79	\$3,375.79	\$3,375.79	\$3,375.79	\$3,375.79	\$3,375.79	\$3,375.79	\$3,375.79
Contingencies (10%)		\$4,843.93	\$5,651.83	\$6,509.31	\$7,334.75	\$8,160.03	\$9,007.02	\$9,882.22	\$10,795.03	\$11,759.57	\$5,651.83
Total Wall Cost (Masonry)		\$56,659.00	\$65,545.97	\$74,978.17	\$84,057.99	\$93,136.13	\$102,452.99	\$112,080.19	\$122,121.16	\$132,731.09	\$65,545.97
Total Wall Cost (Masonry)		\$56,660	\$65,550	\$74,980	\$84,060	\$93,140	\$102,500	\$112,100	\$122,100	\$132,700	\$65,550

Design Barrier Length Per Height (FT)	0	207	0	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: I-10 channel North of freeway between Cherry Ave and Citrus Ave
Station: 1749+00

Wall #: S1749

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	2065

Location: WB Right of Way between Citrus Ave and Cypress Ave
Station: 1811+00.00

Cost Estimate for Barrier S1819 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		130	130	139	160	173	189	207	230	259	Varies
Total Pile Length (ft)		1105	1300	1594	1838	2077	2359	2697	3110	3627	2359
Pile cost (Drill & Cast)	\$50/LF	\$55,264.08	\$65,016.56	\$79,715.32	\$91,890.75	\$103,826.50	\$117,927.84	\$134,844.45	\$155,514.75	\$181,346.38	\$117,927.84
Sound Wall Area (SQFT)		16516	20645	24774	28903	33032	37162	41291	45420	49549	37162
Masonry Cost ²	\$17/SQFT	\$280,776.08	\$350,970.10	\$421,164.12	\$491,358.14	\$561,552.16	\$631,746.18	\$701,940.20	\$772,134.22	\$842,328.24	\$631,746.18
Pile Cap (CY)		200.7	200.7	200.7	200.7	200.7	200.7	200.7	200.7	200.7	200.7
Structure Conc. Cost	\$650/CY	\$130,466.83	\$130,466.83	\$130,466.83	\$130,466.83	\$130,466.83	\$130,466.83	\$130,466.83	\$130,466.83	\$130,466.83	\$130,466.83
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		200.7	200.7	200.7	200.7	200.7	200.7	200.7	200.7	200.7	200.7
Structure Excavation Cost	\$65/CY	\$13,046.68	\$13,046.68	\$13,046.68	\$13,046.68	\$13,046.68	\$13,046.68	\$13,046.68	\$13,046.68	\$13,046.68	\$13,046.68
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$56,000.00	\$56,000.00	\$56,000.00	\$56,000.00	\$56,000.00	\$56,000.00	\$56,000.00	\$56,000.00	\$56,000.00	\$56,000.00
Wall Cost (Masonry)		\$535,553.67	\$615,500.17	\$700,392.95	\$782,762.40	\$864,892.17	\$949,187.53	\$1,036,298.16	\$1,127,162.48	\$1,223,188.12	\$949,187.53
Traffic Control	\$11/LF	\$23,809.83	\$23,809.83	\$23,809.83	\$23,809.83	\$23,809.83	\$23,809.83	\$23,809.83	\$23,809.83	\$23,809.83	\$23,809.83
Contingencies (10%)		\$53,555.37	\$61,550.02	\$70,039.29	\$78,276.24	\$86,489.22	\$94,918.75	\$103,629.82	\$112,716.25	\$122,318.81	\$94,918.75
Total Wall Cost (Masonry)		\$612,918.86	\$700,860.02	\$794,242.07	\$884,848.47	\$975,191.22	\$1,067,916.11	\$1,163,737.80	\$1,263,688.56	\$1,369,316.77	\$1,067,916.11
Total Wall Cost (Masonry)		\$612,900	\$700,900	\$794,200	\$884,800	\$975,200	\$1,068,000	\$1,164,000	\$1,264,000	\$1,369,000	\$1,068,000

Design Barrier Length Per Height (FT)	0	0	0	0	0	2065	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Citrus Ave and Cypress Ave
Station: 1811+00

Wall #: S1819

**I-10 Corridor Soundwall Cost Estimate
Alternative 2 - HOV**

Existing Condition	Fence
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	706

Location: WB Right of Way between Cypress Ave and Sierra Ave
Station: 1832+00.00

Cost Estimate for Barrier S1833 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		72	72	72	72	72	72	72	72	72	Varies
Total Pile Length (ft)		680	752	823	895	931	1002	1074	1146	1217	931
Pile cost (Drill & Cast)	\$50/LF	\$34,012.38	\$37,592.63	\$41,172.88	\$44,753.13	\$46,543.25	\$50,123.50	\$53,703.75	\$57,284.00	\$60,864.25	\$46,543.25
Sound Wall Area (SQFT)		3763	5175	6587	8000	9412	10824	12236	13648	15060	9412
Masonry Cost ²	\$17/SQFT	\$63,975.19	\$87,980.89	\$111,986.59	\$135,992.29	\$159,997.99	\$184,003.69	\$208,009.39	\$232,015.09	\$256,020.79	\$159,997.99
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$63,544.50	\$63,544.50	\$63,544.50	\$63,544.50	\$63,544.50	\$63,544.50	\$63,544.50	\$63,544.50	\$63,544.50	\$63,544.50
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00
Wall Cost (Masonry)		\$188,932.07	\$216,518.02	\$244,103.97	\$271,689.92	\$297,485.74	\$325,071.69	\$352,657.64	\$380,243.59	\$407,829.54	\$297,485.74
Traffic Control	\$11/LF	\$8,866.55	\$8,866.55	\$8,866.55	\$8,866.55	\$8,866.55	\$8,866.55	\$8,866.55	\$8,866.55	\$8,866.55	\$8,866.55
Contingencies (10%)		\$18,893.21	\$21,651.80	\$24,410.40	\$27,168.99	\$29,748.57	\$32,507.17	\$35,265.76	\$38,024.36	\$40,782.95	\$29,748.57
Total Wall Cost (Masonry)		\$216,691.82	\$247,036.37	\$277,380.91	\$307,725.46	\$336,100.86	\$366,445.41	\$396,789.95	\$427,134.50	\$457,479.04	\$336,100.86
Total Wall Cost (Masonry)		\$216,700	\$247,000	\$277,400	\$307,700	\$336,100	\$366,400	\$396,800	\$427,100	\$457,500	\$336,100

Design Barrier Length Per Height (FT)	0	0	0	0	706	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Cypress Ave and Sierra Ave
Station: 1832+00

Wall #: S1833

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1502

Location: WB Right of Way between Sierra Ave and Cedar Ave
Station: 1877+00.00

Cost Estimate for Barrier S1877 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		95	95	101	117	126	138	151	168	189	Varies
Total Pile Length (ft)		806	949	1163	1340	1514	1719	1965	2266	2642	1514
Pile cost (Drill & Cast)	\$50/LF	\$40,317.63	\$47,432.50	\$58,145.53	\$67,002.54	\$75,692.00	\$85,956.82	\$98,269.60	\$113,313.00	\$132,111.00	\$75,692.00
Sound Wall Area (SQFT)		12015	15018	18022	21026	24029	27033	30037	33040	36044	24029
Masonry Cost ²	\$17/SQFT	\$204,250.24	\$255,312.80	\$306,375.36	\$357,437.92	\$408,500.48	\$459,563.04	\$510,625.60	\$561,688.16	\$612,750.72	\$408,500.48
Pile Cap (CY)		146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0
Structure Conc. Cost	\$650/CY	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0
Structure Excavation Cost	\$65/CY	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79
Remove Exist Wall Cost	\$17/LF	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00
Wall Cost (Masonry)		\$370,066.60	\$428,244.04	\$490,019.63	\$549,939.20	\$609,691.22	\$671,018.60	\$734,393.94	\$800,499.90	\$870,360.46	\$609,691.22
Traffic Control	\$11/LF	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24
Contingencies (10%)		\$37,006.66	\$42,824.40	\$49,001.96	\$54,993.92	\$60,969.12	\$67,101.86	\$73,439.39	\$80,049.99	\$87,036.05	\$60,969.12
Total Wall Cost (Masonry)		\$424,693.50	\$488,688.68	\$556,641.84	\$622,553.36	\$688,280.58	\$755,740.70	\$825,453.57	\$898,170.13	\$975,016.74	\$688,280.58
Total Wall Cost (Masonry)		\$424,700	\$488,700	\$556,600	\$622,600	\$688,300	\$755,700	\$825,500	\$898,200	\$975,000	\$688,300

Design Barrier Length Per Height (FT)

0	0	0	0	1502	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Sierra Ave and Cedar Ave
Station: 1877+00

Wall #: S1877

**I-10 Corridor Soundwall Cost Estimate
Alternative 2 - HOV**

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	3587

Location: WB Right of Way between Sierra Ave and Cedar Ave
Station: 1907+00.00

Cost Estimate for Barrier S1907 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		225	225	240	277	300	327	360	400	449	Varies
Total Pile Length (ft)		1914	2252	2762	3185	3599	4089	4677	5394	6292	3183
Pile cost (Drill & Cast)	\$50/LF	\$95,712.92	\$112,603.44	\$138,088.55	\$159,244.48	\$179,965.50	\$204,449.43	\$233,825.15	\$269,723.25	\$314,589.63	\$159,141.41
Sound Wall Area (SQFT)		28698	35873	43048	50222	57397	64572	71746	78921	86095	50220
Masonry Cost ²	\$17/SQFT	\$487,874.16	\$609,842.70	\$731,811.24	\$853,779.78	\$975,748.32	\$1,097,716.86	\$1,219,685.40	\$1,341,653.94	\$1,463,622.48	\$853,744.08
Pile Cap (CY)		348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8
Structure Conc. Cost	\$650/CY	\$226,698.06	\$226,698.06	\$226,698.06	\$226,698.06	\$226,698.06	\$226,698.06	\$226,698.06	\$226,698.06	\$226,698.06	\$226,698.06
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8
Structure Excavation Cost	\$65/CY	\$22,669.81	\$22,669.81	\$22,669.81	\$22,669.81	\$22,669.81	\$22,669.81	\$22,669.81	\$22,669.81	\$22,669.81	\$22,669.81
Remove Exist Wall Cost	\$17/LF	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00
Wall Cost (Masonry)		\$1,059,964.95	\$1,198,824.01	\$1,346,277.66	\$1,489,402.13	\$1,632,091.69	\$1,778,544.16	\$1,929,888.42	\$2,087,755.06	\$2,254,589.97	\$1,489,263.36
Traffic Control	\$11/LF	\$40,560.41	\$40,560.41	\$40,560.41	\$40,560.41	\$40,560.41	\$40,560.41	\$40,560.41	\$40,560.41	\$40,560.41	\$40,560.41
Contingencies (10%)		\$105,996.50	\$119,882.40	\$134,627.77	\$148,940.21	\$163,209.17	\$177,854.42	\$192,988.84	\$208,775.51	\$225,459.00	\$148,926.34
Total Wall Cost (Masonry)		\$1,206,521.86	\$1,359,266.82	\$1,521,465.83	\$1,678,902.75	\$1,835,861.27	\$1,996,958.99	\$2,163,437.67	\$2,337,090.97	\$2,520,609.38	\$1,678,750.10
Total Wall Cost (Masonry)		\$1,207,000	\$1,359,000	\$1,521,000	\$1,679,000	\$1,836,000	\$1,997,000	\$2,163,000	\$2,337,000	\$2,521,000	\$1,679,000

Design Barrier Length Per Height (FT)	0	0	800	1988	799	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Sierra Ave and Cedar Ave
Station: 1907+00

Wall #: S1907

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	123

Location: WB Right of Way near WB I-10 Cedar Ave on-ramp
Station: 1969+00.00

Cost Estimate for Barrier S1969_1 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		9	9	9	10	11	12	13	15	16	Varies
Total Pile Length (ft)		74	87	106	121	135	153	173	199	230	106
Pile cost (Drill & Cast)	\$50/LF	\$3,704.14	\$4,357.81	\$5,307.25	\$6,035.29	\$6,772.50	\$7,639.20	\$8,674.25	\$9,933.75	\$11,501.88	\$5,307.25
Sound Wall Area (SQFT)		988	1235	1481	1728	1975	2222	2469	2716	2963	1481
Masonry Cost ²	\$17/SQFT	\$16,789.20	\$20,986.50	\$25,183.80	\$29,381.10	\$33,578.40	\$37,775.70	\$41,973.00	\$46,170.30	\$50,367.60	\$25,183.80
Pile Cap (CY)		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Structure Conc. Cost	\$650/CY	\$7,801.35	\$7,801.35	\$7,801.35	\$7,801.35	\$7,801.35	\$7,801.35	\$7,801.35	\$7,801.35	\$7,801.35	\$7,801.35
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Structure Excavation Cost	\$65/CY	\$780.14	\$780.14	\$780.14	\$780.14	\$780.14	\$780.14	\$780.14	\$780.14	\$780.14	\$780.14
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$29,074.83	\$33,925.80	\$39,072.54	\$43,997.88	\$48,932.39	\$53,996.39	\$59,228.74	\$64,685.54	\$70,450.96	\$39,072.54
Traffic Control	\$11/LF	\$2,457.95	\$2,457.95	\$2,457.95	\$2,457.95	\$2,457.95	\$2,457.95	\$2,457.95	\$2,457.95	\$2,457.95	\$2,457.95
Contingencies (10%)		\$2,907.48	\$3,392.58	\$3,907.25	\$4,399.79	\$4,893.24	\$5,399.64	\$5,922.87	\$6,468.55	\$7,045.10	\$3,907.25
Total Wall Cost (Masonry)		\$34,440.26	\$39,776.33	\$45,437.74	\$50,855.62	\$56,283.58	\$61,853.98	\$67,609.56	\$73,612.04	\$79,954.01	\$45,437.74
Total Wall Cost (Masonry)		\$34,440	\$39,780	\$45,440	\$50,860	\$56,280	\$61,850	\$67,610	\$73,610	\$79,950	\$45,440

Design Barrier Length Per Height (FT)	0	0	123	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way near WB I-10 Cedar Ave on-ramp
Station: 1969+00

Wall #: S1969_1

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Retaining wall
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	230

Location: WB Right of Way near WB I-10 Cedar Ave on-ramp
Station: 1969+50.00

Cost Estimate for Barrier S1969_2 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		1228	1688	2149	2610	3071	3531	3992	4453	4913	2149
Masonry Cost ²	\$17/SQFT	\$20,872.01	\$28,703.91	\$36,535.81	\$44,367.71	\$52,199.61	\$60,031.51	\$67,863.41	\$75,695.31	\$83,527.21	\$36,535.81
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00
Wall Cost (Masonry)		\$28,672.01	\$36,503.91	\$44,335.81	\$52,167.71	\$59,999.61	\$67,831.51	\$75,663.41	\$83,495.31	\$91,327.21	\$44,335.81
Traffic Control	\$11/LF	\$3,633.85	\$3,633.85	\$3,633.85	\$3,633.85	\$3,633.85	\$3,633.85	\$3,633.85	\$3,633.85	\$3,633.85	\$3,633.85
Contingencies (10%)		\$2,867.20	\$3,650.39	\$4,433.58	\$5,216.77	\$5,999.96	\$6,783.15	\$7,566.34	\$8,349.53	\$9,132.72	\$4,433.58
Total Wall Cost (Masonry)		\$35,173.06	\$43,788.15	\$52,403.24	\$61,018.33	\$69,633.42	\$78,248.51	\$86,863.60	\$95,478.69	\$104,093.78	\$52,403.24
Total Wall Cost (Masonry)		\$35,170	\$43,790	\$52,400	\$61,020	\$69,630	\$78,250	\$86,860	\$95,480	\$104,100	\$52,400

Design Barrier Length Per Height (FT)	0	0	230	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way near WB I-10 Cedar Ave on-ramp
Station: 1969+50

Wall #: S1969_2

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Retaining wall
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	444

Location: WB Right of Way between Cedar Ave and Riverside Ave
Station: 2033+00.00

		Cost Estimate for Barrier S2033 (Alternative #2)									
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		29	29	31	35	38	41	45	50	57	Varies
Total Pile Length (ft)		245	288	352	404	456	517	591	680	791	591
Pile cost (Drill & Cast)	\$50/LF	\$12,225.13	\$14,382.50	\$17,604.20	\$20,224.08	\$22,812.00	\$25,865.91	\$29,525.60	\$33,993.00	\$39,571.00	\$29,525.60
Sound Wall Area (SQFT)		3554	4442	5331	6219	7108	7996	8885	9773	10662	8885
Masonry Cost ²	\$17/SQFT	\$60,416.64	\$75,520.80	\$90,624.96	\$105,729.12	\$120,833.28	\$135,937.44	\$151,041.60	\$166,145.76	\$181,249.92	\$151,041.60
Pile Cap (CY)		43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Structure Conc. Cost	\$650/CY	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Structure Excavation Cost	\$65/CY	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00
Wall Cost (Masonry)		\$131,122.62	\$148,384.15	\$166,710.01	\$184,434.05	\$202,126.13	\$220,284.20	\$239,048.05	\$258,619.61	\$279,301.77	\$239,048.05
Traffic Control	\$11/LF	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64
Contingencies (10%)		\$13,112.26	\$14,838.42	\$16,671.00	\$18,443.40	\$20,212.61	\$22,028.42	\$23,904.81	\$25,861.96	\$27,930.18	\$23,904.81
Total Wall Cost (Masonry)		\$150,221.52	\$169,209.21	\$189,367.65	\$208,864.09	\$228,325.38	\$248,299.26	\$268,939.50	\$290,468.21	\$313,218.59	\$268,939.50
Total Wall Cost (Masonry)		\$150,200	\$169,200	\$189,400	\$208,900	\$228,300	\$248,300	\$268,900	\$290,500	\$313,200	\$268,900

Design Barrier Length Per Height (FT)	0	0	0	0	0	0	444	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Cedar Ave and Riverside Ave
Station: 2033+00

Wall #: S2033

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	729

Location: WB Right of Way between Riverside Ave and Pepper Ave
Station: 2076+00.00

		Cost Estimate for Barrier S2079 (Alternative #2)									
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		47	47	50	57	62	67	74	82	92	Varies
Total Pile Length (ft)		396	466	570	656	741	841	961	1107	1290	741
Pile cost (Drill & Cast)	\$50/LF	\$19,792.52	\$23,285.31	\$28,524.98	\$32,824.98	\$37,056.50	\$42,052.84	\$48,043.45	\$55,359.75	\$64,498.88	\$37,056.50
Sound Wall Area (SQFT)		5833	7291	8750	10208	11666	13124	14583	16041	17499	11666
Masonry Cost ²	\$17/SQFT	\$99,161.68	\$123,952.10	\$148,742.52	\$173,532.94	\$198,323.36	\$223,113.78	\$247,904.20	\$272,694.62	\$297,485.04	\$198,323.36
Pile Cap (CY)		70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9
Structure Conc. Cost	\$650/CY	\$46,076.97	\$46,076.97	\$46,076.97	\$46,076.97	\$46,076.97	\$46,076.97	\$46,076.97	\$46,076.97	\$46,076.97	\$46,076.97
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9
Structure Excavation Cost	\$65/CY	\$4,607.70	\$4,607.70	\$4,607.70	\$4,607.70	\$4,607.70	\$4,607.70	\$4,607.70	\$4,607.70	\$4,607.70	\$4,607.70
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00	\$95,000.00
Wall Cost (Masonry)		\$264,638.86	\$292,922.07	\$322,952.17	\$352,042.58	\$381,064.52	\$410,851.28	\$441,632.31	\$473,739.03	\$507,668.58	\$381,064.52
Traffic Control	\$11/LF	\$9,120.43	\$9,120.43	\$9,120.43	\$9,120.43	\$9,120.43	\$9,120.43	\$9,120.43	\$9,120.43	\$9,120.43	\$9,120.43
Contingencies (10%)		\$26,463.89	\$29,292.21	\$32,295.22	\$35,204.26	\$38,106.45	\$41,085.13	\$44,163.23	\$47,373.90	\$50,766.86	\$38,106.45
Total Wall Cost (Masonry)		\$300,223.17	\$331,334.71	\$364,367.81	\$396,367.27	\$428,291.40	\$461,056.84	\$494,915.97	\$530,233.36	\$567,555.86	\$428,291.40
Total Wall Cost (Masonry)		\$300,200	\$331,300	\$364,400	\$396,400	\$428,300	\$461,100	\$494,900	\$530,200	\$567,600	\$428,300

Design Barrier Length Per Height (FT)	0	0	0	0	729	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Riverside Ave and Pepper Ave
Station: 2076+00

Wall #: S2079

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Fence
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	2289

Location: WB Right of Way between Pepper Ave and Rancho Ave
Station: 2137+00.00

Cost Estimate for Barrier S2145 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		230	230	230	230	230	230	230	230	230	Varies
Total Pile Length (ft)		2184	2414	2643	2873	2988	3218	3448	3678	3908	3325
Pile cost (Drill & Cast)	\$50/LF	\$109,187.30	\$120,680.70	\$132,174.10	\$143,667.50	\$149,414.20	\$160,907.60	\$172,401.00	\$183,894.40	\$195,387.80	\$166,230.56
Sound Wall Area (SQFT)		12199	16776	21353	25931	30508	35085	39663	44240	48818	37205
Masonry Cost ²	\$17/SQFT	\$207,377.29	\$285,192.41	\$363,007.53	\$440,822.65	\$518,637.77	\$596,452.89	\$674,268.01	\$752,083.13	\$829,898.25	\$632,491.53
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$205,981.20	\$205,981.20	\$205,981.20	\$205,981.20	\$205,981.20	\$205,981.20	\$205,981.20	\$205,981.20	\$205,981.20	\$205,981.20
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$522,545.79	\$611,854.31	\$701,162.83	\$790,471.35	\$874,033.17	\$963,341.69	\$1,052,650.21	\$1,141,958.73	\$1,231,267.25	\$1,004,703.29
Traffic Control	\$11/LF	\$26,275.48	\$26,275.48	\$26,275.48	\$26,275.48	\$26,275.48	\$26,275.48	\$26,275.48	\$26,275.48	\$26,275.48	\$26,275.48
Contingencies (10%)		\$52,254.58	\$61,185.43	\$70,116.28	\$79,047.14	\$87,403.32	\$96,334.17	\$105,265.02	\$114,195.87	\$123,126.73	\$100,470.33
Total Wall Cost (Masonry)		\$601,075.85	\$699,315.23	\$797,554.60	\$895,793.97	\$987,711.97	\$1,085,951.34	\$1,184,190.72	\$1,282,430.09	\$1,380,669.46	\$1,131,449.10
Total Wall Cost (Masonry)		\$601,100	\$699,300	\$797,600	\$895,800	\$987,700	\$1,086,000	\$1,184,000	\$1,282,000	\$1,381,000	\$1,131,000

Design Barrier Length Per Height (FT)

0	0	0	0	1104	0	206	979	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Pepper Ave and Rancho Ave
Station: 2137+00

Wall #: S2145

**I-10 Corridor Soundwall Cost Estimate
Alternative 2 - HOV**

Existing Condition	Retaining wall
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	792

Location: WB I-10 between Waterman Ave and Tippecanoe Ave
Station: 2379+00.00

Cost Estimate for Barrier S2382 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		80	80	80	80	80	80	80	80	80	Varies
Total Pile Length (ft)		762	842	923	1003	1043	1123	1204	1284	1364	923
Pile cost (Drill & Cast)	\$50/LF	\$38,112.10	\$42,123.90	\$46,135.70	\$50,147.50	\$52,153.40	\$56,165.20	\$60,177.00	\$64,188.80	\$68,200.60	\$46,135.70
Sound Wall Area (SQFT)		4223	5808	7393	8977	10562	12147	13732	15316	16901	7393
Masonry Cost ²	\$17/SQFT	\$71,795.74	\$98,735.98	\$125,676.22	\$152,616.46	\$179,556.70	\$206,496.94	\$233,437.18	\$260,377.42	\$287,317.66	\$125,676.22
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$71,312.40	\$71,312.40	\$71,312.40	\$71,312.40	\$71,312.40	\$71,312.40	\$71,312.40	\$71,312.40	\$71,312.40	\$71,312.40
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$181,220.24	\$212,172.28	\$243,124.32	\$274,076.36	\$303,022.50	\$333,974.54	\$364,926.58	\$395,878.62	\$426,830.66	\$243,124.32
Traffic Control	\$11/LF	\$9,815.96	\$9,815.96	\$9,815.96	\$9,815.96	\$9,815.96	\$9,815.96	\$9,815.96	\$9,815.96	\$9,815.96	\$9,815.96
Contingencies (10%)		\$18,122.02	\$21,217.23	\$24,312.43	\$27,407.64	\$30,302.25	\$33,397.45	\$36,492.66	\$39,587.86	\$42,683.07	\$24,312.43
Total Wall Cost (Masonry)		\$209,158.22	\$243,205.47	\$277,252.71	\$311,299.96	\$343,140.71	\$377,187.95	\$411,235.20	\$445,282.44	\$479,329.69	\$277,252.71
Total Wall Cost (Masonry)		\$209,200	\$243,200	\$277,300	\$311,300	\$343,100	\$377,200	\$411,200	\$445,300	\$479,300	\$277,300

Design Barrier Length Per Height (FT)	0	0	792	0	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 between Waterman Ave and Tippecanoe Ave
Station: 2379+00

Wall #: S2382

**I-10 Corridor Soundwall Cost Estimate
Alternative 2 - HOV**

Existing Condition	Barrier
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	393

Location: EB Right of Way near EB I-10 Tippecanoe Ave off-ramp
Station: 2381+00.00

Cost Estimate for Barrier S2384 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		26	26	27	31	34	37	40	45	50	Varies
Total Pile Length (ft)		217	255	313	359	405	459	523	603	701	405
Pile cost (Drill & Cast)	\$50/LF	\$10,855.30	\$12,770.94	\$15,627.35	\$17,943.10	\$20,233.50	\$22,935.80	\$26,173.55	\$30,125.25	\$35,058.63	\$20,233.50
Sound Wall Area (SQFT)		3141	3927	4712	5497	6283	7068	7853	8639	9424	6283
Masonry Cost ²	\$17/SQFT	\$53,403.12	\$66,753.90	\$80,104.68	\$93,455.46	\$106,806.24	\$120,157.02	\$133,507.80	\$146,858.58	\$160,209.36	\$106,806.24
Pile Cap (CY)		38.2	38.2	38.2	38.2	38.2	38.2	38.2	38.2	38.2	38.2
Structure Conc. Cost	\$650/CY	\$24,814.56	\$24,814.56	\$24,814.56	\$24,814.56	\$24,814.56	\$24,814.56	\$24,814.56	\$24,814.56	\$24,814.56	\$24,814.56
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		38.2	38.2	38.2	38.2	38.2	38.2	38.2	38.2	38.2	38.2
Structure Excavation Cost	\$65/CY	\$2,481.46	\$2,481.46	\$2,481.46	\$2,481.46	\$2,481.46	\$2,481.46	\$2,481.46	\$2,481.46	\$2,481.46	\$2,481.46
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$91,554.44	\$106,820.86	\$123,028.05	\$138,694.57	\$154,335.76	\$170,388.83	\$186,977.37	\$204,279.85	\$222,564.00	\$154,335.76
Traffic Control	\$11/LF	\$5,419.37	\$5,419.37	\$5,419.37	\$5,419.37	\$5,419.37	\$5,419.37	\$5,419.37	\$5,419.37	\$5,419.37	\$5,419.37
Contingencies (10%)		\$9,155.44	\$10,682.09	\$12,302.80	\$13,869.46	\$15,433.58	\$17,038.88	\$18,697.74	\$20,427.98	\$22,256.40	\$15,433.58
Total Wall Cost (Masonry)		\$106,129.25	\$122,922.31	\$140,750.22	\$157,983.40	\$175,188.70	\$192,847.09	\$211,094.48	\$230,127.20	\$250,239.77	\$175,188.70
Total Wall Cost (Masonry)		\$106,100	\$122,900	\$140,800	\$158,000	\$175,200	\$192,800	\$211,100	\$230,100	\$250,200	\$175,200

Design Barrier Length Per Height (FT)	0	0	0	0	393	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB Right of Way near EB I-10 Tippecanoe Ave off-ramp
Station: 2381+00

Wall #: S2384

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1418

Location: EB Right of Way near EB I-10 Mountain Ave off-ramp
Station: 2427+00.00

Cost Estimate for Barrier S2434A (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		90	90	96	110	119	130	143	159	178	Varies
Total Pile Length (ft)		762	896	1099	1266	1430	1624	1857	2141	2496	1147
Pile cost (Drill & Cast)	\$50/LF	\$38,093.28	\$44,815.63	\$54,935.50	\$63,298.65	\$71,505.00	\$81,198.86	\$92,826.50	\$107,032.50	\$124,783.75	\$57,367.64
Sound Wall Area (SQFT)		11345	14181	17017	19853	22690	25526	28362	31198	34034	17848
Masonry Cost ²	\$17/SQFT	\$192,861.60	\$241,077.00	\$289,292.40	\$337,507.80	\$385,723.20	\$433,938.60	\$482,154.00	\$530,369.40	\$578,584.80	\$303,415.66
Pile Cap (CY)		137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9
Structure Conc. Cost	\$650/CY	\$89,616.04	\$89,616.04	\$89,616.04	\$89,616.04	\$89,616.04	\$89,616.04	\$89,616.04	\$89,616.04	\$89,616.04	\$89,616.04
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9
Structure Excavation Cost	\$65/CY	\$8,961.60	\$8,961.60	\$8,961.60	\$8,961.60	\$8,961.60	\$8,961.60	\$8,961.60	\$8,961.60	\$8,961.60	\$8,961.60
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$124,000.00	\$124,000.00	\$124,000.00	\$124,000.00	\$124,000.00	\$124,000.00	\$124,000.00	\$124,000.00	\$124,000.00	\$124,000.00
Wall Cost (Masonry)		\$453,532.53	\$508,470.27	\$566,805.55	\$623,384.10	\$679,805.85	\$737,715.11	\$797,558.15	\$859,979.55	\$925,946.20	\$583,360.94
Traffic Control	\$11/LF	\$16,699.10	\$16,699.10	\$16,699.10	\$16,699.10	\$16,699.10	\$16,699.10	\$16,699.10	\$16,699.10	\$16,699.10	\$16,699.10
Contingencies (10%)		\$45,353.25	\$50,847.03	\$56,680.55	\$62,338.41	\$67,980.58	\$73,771.51	\$79,755.81	\$85,997.95	\$92,594.62	\$58,336.09
Total Wall Cost (Masonry)		\$515,584.88	\$576,016.40	\$640,185.20	\$702,421.61	\$764,485.53	\$828,185.72	\$894,013.06	\$962,676.60	\$1,035,239.92	\$658,396.14
Total Wall Cost (Masonry)		\$515,600	\$576,000	\$640,200	\$702,400	\$764,500	\$828,200	\$894,000	\$962,700	\$1,035,000	\$658,400

Design Barrier Length Per Height (FT)

0

0

1162

97

159

0

0

Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB Right of Way near EB I-10 Mountain Ave off-ramp
Station: 2427+00

Wall #: S2434A

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1400

Location: EB I-10 Mountain Ave off-ramp
Station: 2433+00.00

Cost Estimate for Barrier S2434B (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		141	141	141	141	141	141	141	141	141	Varies
Total Pile Length (ft)		1339	1480	1621	1762	1833	1974	2115	2256	2396	1621
Pile cost (Drill & Cast)	\$50/LF	\$66,960.28	\$74,008.73	\$81,057.18	\$88,105.63	\$91,629.85	\$98,678.30	\$105,726.75	\$112,775.20	\$119,823.65	\$81,057.18
Sound Wall Area (SQFT)		7460	10260	13059	15858	18658	21457	24257	27056	29855	13059
Masonry Cost ²	\$17/SQFT	\$126,825.91	\$174,415.37	\$222,004.83	\$269,594.29	\$317,183.75	\$364,773.21	\$412,362.67	\$459,952.13	\$507,541.59	\$222,004.83
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$125,972.10	\$125,972.10	\$125,972.10	\$125,972.10	\$125,972.10	\$125,972.10	\$125,972.10	\$125,972.10	\$125,972.10	\$125,972.10
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$319,758.29	\$374,396.20	\$429,034.11	\$483,672.02	\$534,785.70	\$589,423.61	\$644,061.52	\$698,699.43	\$753,337.34	\$429,034.11
Traffic Control	\$11/LF	\$16,496.59	\$16,496.59	\$16,496.59	\$16,496.59	\$16,496.59	\$16,496.59	\$16,496.59	\$16,496.59	\$16,496.59	\$16,496.59
Contingencies (10%)		\$31,975.83	\$37,439.62	\$42,903.41	\$48,367.20	\$53,478.57	\$58,942.36	\$64,406.15	\$69,869.94	\$75,333.73	\$42,903.41
Total Wall Cost (Masonry)		\$368,230.70	\$428,332.41	\$488,434.11	\$548,535.81	\$604,760.86	\$664,862.56	\$724,964.26	\$785,065.96	\$845,167.66	\$488,434.11
Total Wall Cost (Masonry)		\$368,200	\$428,300	\$488,400	\$548,500	\$604,800	\$664,900	\$725,000	\$785,100	\$845,200	\$488,400

Design Barrier Length Per Height (FT)	0	0	1400	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 Mountain Ave off-ramp
Station: 2433+00

Wall #: S2434B

**I-10 Corridor Soundwall Cost Estimate
Alternative 2 - HOV**

Existing Condition	Blockwall
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	469

Location: WB Right of Way near WB I-10 Mountain Ave on-ramp
Station: 2435+00.00

Cost Estimate for Barrier S2435 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		48	48	48	48	48	48	48	48	48	Varies
Total Pile Length (ft)		455	503	551	599	623	670	718	766	814	503
Pile cost (Drill & Cast)	\$50/LF	\$22,748.23	\$25,142.78	\$27,537.33	\$29,931.88	\$31,129.15	\$33,523.70	\$35,918.25	\$38,312.80	\$40,707.35	\$25,142.78
Sound Wall Area (SQFT)		2499	3437	4375	5313	6251	7188	8126	9064	10002	3437
Masonry Cost ²	\$17/SQFT	\$42,487.94	\$58,430.88	\$74,373.82	\$90,316.76	\$106,259.70	\$122,202.64	\$138,145.58	\$154,088.52	\$170,031.46	\$58,430.88
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$42,201.90	\$42,201.90	\$42,201.90	\$42,201.90	\$42,201.90	\$42,201.90	\$42,201.90	\$42,201.90	\$42,201.90	\$42,201.90
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$115,411.06	\$133,748.55	\$152,086.04	\$170,423.53	\$187,563.75	\$205,901.24	\$224,238.73	\$242,576.22	\$260,913.71	\$133,748.55
Traffic Control	\$11/LF	\$6,258.01	\$6,258.01	\$6,258.01	\$6,258.01	\$6,258.01	\$6,258.01	\$6,258.01	\$6,258.01	\$6,258.01	\$6,258.01
Contingencies (10%)		\$11,541.11	\$13,374.86	\$15,208.60	\$17,042.35	\$18,756.37	\$20,590.12	\$22,423.87	\$24,257.62	\$26,091.37	\$13,374.86
Total Wall Cost (Masonry)		\$133,210.18	\$153,381.42	\$173,552.65	\$193,723.89	\$212,578.13	\$232,749.37	\$252,920.61	\$273,091.85	\$293,263.09	\$153,381.42
Total Wall Cost (Masonry)		\$133,200	\$153,400	\$173,600	\$193,700	\$212,600	\$232,700	\$252,900	\$273,100	\$293,300	\$153,400

Design Barrier Length Per Height (FT)	0	469	0	0	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way near WB I-10 Mountain Ave on-ramp
Station: 2435+00

Wall #: S2435

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1016

Location: WB I-10 between Richardson St and Mountainview Ave
Station: 2437+00.00

Cost Estimate for Barrier S2437 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		5413	7444	9476	11507	13538	15569	17600	19632	21663	11507
Masonry Cost ²	\$17/SQFT	\$92,023.52	\$126,553.92	\$161,084.32	\$195,614.72	\$230,145.12	\$264,675.52	\$299,205.92	\$333,736.32	\$368,266.72	\$195,614.72
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$92,023.52	\$126,553.92	\$161,084.32	\$195,614.72	\$230,145.12	\$264,675.52	\$299,205.92	\$333,736.32	\$368,266.72	\$195,614.72
Traffic Control	\$11/LF	\$12,271.60	\$12,271.60	\$12,271.60	\$12,271.60	\$12,271.60	\$12,271.60	\$12,271.60	\$12,271.60	\$12,271.60	\$12,271.60
Contingencies (10%)		\$9,202.35	\$12,655.39	\$16,108.43	\$19,561.47	\$23,014.51	\$26,467.55	\$29,920.59	\$33,373.63	\$36,826.67	\$19,561.47
Total Wall Cost (Masonry)		\$113,497.47	\$151,480.91	\$189,464.35	\$227,447.79	\$265,431.23	\$303,414.67	\$341,398.11	\$379,381.55	\$417,364.99	\$227,447.79
Total Wall Cost (Masonry)		\$113,500	\$151,500	\$189,500	\$227,400	\$265,400	\$303,400	\$341,400	\$379,400	\$417,400	\$227,400

Design Barrier Length Per Height (FT)	0	0	0	1016	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 between Richardson St and Mountainview Ave
Station: 2437+00

Wall #: S2437

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1262

Location: EB I-10 between Richardson St and Mountainview Ave
Station: 2438+00.00

		Cost Estimate for Barrier S2438 (Alternative #2)									
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		6727	9251	11775	14299	16823	19347	21871	24395	26919	12607
Masonry Cost ²	\$17/SQFT	\$114,352.54	\$157,261.56	\$200,170.58	\$243,079.60	\$285,988.62	\$328,897.64	\$371,806.66	\$414,715.68	\$457,624.70	\$214,314.92
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$114,352.54	\$157,261.56	\$200,170.58	\$243,079.60	\$285,988.62	\$328,897.64	\$371,806.66	\$414,715.68	\$457,624.70	\$214,314.92
Traffic Control	\$11/LF	\$14,982.33	\$14,982.33	\$14,982.33	\$14,982.33	\$14,982.33	\$14,982.33	\$14,982.33	\$14,982.33	\$14,982.33	\$14,982.33
Contingencies (10%)		\$11,435.25	\$15,726.16	\$20,017.06	\$24,307.96	\$28,598.86	\$32,889.76	\$37,180.67	\$41,471.57	\$45,762.47	\$21,431.49
Total Wall Cost (Masonry)		\$140,770.12	\$187,970.04	\$235,169.97	\$282,369.89	\$329,569.81	\$376,769.73	\$423,969.65	\$471,169.58	\$518,369.50	\$250,728.74
Total Wall Cost (Masonry)		\$140,800	\$188,000	\$235,200	\$282,400	\$329,600	\$376,800	\$424,000	\$471,200	\$518,400	\$250,700

Design Barrier Length Per Height (FT)	0	0	846	416	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Richardson St and Mountainview Ave
Station: 2438+00

Wall #: S2438

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1200

Location: EB I-10 between Richardson St and Mountainview Ave
Station: 2438+10.00

Cost Estimate for Barrier S2438B (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		6396	8796	11196	13596	15997	18397	20797	23197	25597	13596
Masonry Cost ²	\$17/SQFT	\$108,735.62	\$149,536.98	\$190,338.34	\$231,139.70	\$271,941.06	\$312,742.42	\$353,543.78	\$394,345.14	\$435,146.50	\$231,139.70
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$108,735.62	\$149,536.98	\$190,338.34	\$231,139.70	\$271,941.06	\$312,742.42	\$353,543.78	\$394,345.14	\$435,146.50	\$231,139.70
Traffic Control	\$11/LF	\$14,300.44	\$14,300.44	\$14,300.44	\$14,300.44	\$14,300.44	\$14,300.44	\$14,300.44	\$14,300.44	\$14,300.44	\$14,300.44
Contingencies (10%)		\$10,873.56	\$14,953.70	\$19,033.83	\$23,113.97	\$27,194.11	\$31,274.24	\$35,354.38	\$39,434.51	\$43,514.65	\$23,113.97
Total Wall Cost (Masonry)		\$133,909.63	\$178,791.12	\$223,672.62	\$268,554.11	\$313,435.61	\$358,317.11	\$403,198.60	\$448,080.10	\$492,961.59	\$268,554.11
Total Wall Cost (Masonry)		\$133,900	\$178,800	\$223,700	\$268,600	\$313,400	\$358,300	\$403,200	\$448,100	\$493,000	\$268,600

Design Barrier Length Per Height (FT)	0	0	0	1200	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Richardson St and Mountainview Ave
Station: 2438+10

Wall #: S2438B

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	948

Location: EB I-10 between Mountainview Ave and California St
Station: 2466+00.00

		Cost Estimate for Barrier S2476_1 (Alternative #2)									
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		5053	6950	8846	10742	12638	14535	16431	18327	20223	8846
Masonry Cost ²	\$17/SQFT	\$85,908.25	\$118,143.99	\$150,379.73	\$182,615.47	\$214,851.21	\$247,086.95	\$279,322.69	\$311,558.43	\$343,794.17	\$150,379.73
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$85,908.25	\$118,143.99	\$150,379.73	\$182,615.47	\$214,851.21	\$247,086.95	\$279,322.69	\$311,558.43	\$343,794.17	\$150,379.73
Traffic Control	\$11/LF	\$11,529.21	\$11,529.21	\$11,529.21	\$11,529.21	\$11,529.21	\$11,529.21	\$11,529.21	\$11,529.21	\$11,529.21	\$11,529.21
Contingencies (10%)		\$8,590.82	\$11,814.40	\$15,037.97	\$18,261.55	\$21,485.12	\$24,708.69	\$27,932.27	\$31,155.84	\$34,379.42	\$15,037.97
Total Wall Cost (Masonry)		\$106,028.28	\$141,487.60	\$176,946.91	\$212,406.22	\$247,865.54	\$283,324.85	\$318,784.17	\$354,243.48	\$389,702.79	\$176,946.91
Total Wall Cost (Masonry)		\$106,000	\$141,500	\$176,900	\$212,400	\$247,900	\$283,300	\$318,800	\$354,200	\$389,700	\$176,900

Design Barrier Length Per Height (FT)	0	0	948	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.
5. Wall 2476 costs includes tab 2476_1 and 2476_2.

Location: EB I-10 between Mountainview Ave and California St
Station: 2466+00

Wall #: S2476_1

**I-10 Corridor Soundwall Cost Estimate
Alternative 2 - HOV**

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1150

Location: EB I-10 between Mountainview Ave and California St
Station: 2475+00.00

Cost Estimate for Barrier S2476_2 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		116	116	116	116	116	116	116	116	116	Varies
Total Pile Length (ft)		1102	1218	1333	1449	1507	1623	1739	1855	1971	1404
Pile cost (Drill & Cast)	\$50/LF	\$55,078.15	\$60,875.85	\$66,673.55	\$72,471.25	\$75,370.10	\$81,167.80	\$86,965.50	\$92,763.20	\$98,560.90	\$70,180.70
Sound Wall Area (SQFT)		6127	8426	10725	13024	15323	17622	19922	22221	24520	12116
Masonry Cost ²	\$17/SQFT	\$104,159.82	\$143,244.18	\$182,328.54	\$221,412.90	\$260,497.26	\$299,581.62	\$338,665.98	\$377,750.34	\$416,834.70	\$205,971.46
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$103,458.60	\$103,458.60	\$103,458.60	\$103,458.60	\$103,458.60	\$103,458.60	\$103,458.60	\$103,458.60	\$103,458.60	\$103,458.60
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$262,696.57	\$307,578.63	\$352,460.69	\$397,342.75	\$439,325.96	\$484,208.02	\$529,090.08	\$573,972.14	\$618,854.20	\$379,610.76
Traffic Control	\$11/LF	\$13,744.94	\$13,744.94	\$13,744.94	\$13,744.94	\$13,744.94	\$13,744.94	\$13,744.94	\$13,744.94	\$13,744.94	\$13,744.94
Contingencies (10%)		\$26,269.66	\$30,757.86	\$35,246.07	\$39,734.27	\$43,932.60	\$48,420.80	\$52,909.01	\$57,397.21	\$61,885.42	\$37,961.08
Total Wall Cost (Masonry)		\$302,711.17	\$352,081.43	\$401,451.70	\$450,821.96	\$497,003.50	\$546,373.76	\$595,744.03	\$645,114.29	\$694,484.56	\$431,316.77
Total Wall Cost (Masonry)		\$302,700	\$352,100	\$401,500	\$450,800	\$497,000	\$546,400	\$595,700	\$645,100	\$694,500	\$431,300

Design Barrier Length Per Height (FT)	0	0	454	695	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Mountainview Ave and California St
Station: 2475+00

Wall #: S2476_2

**I-10 Corridor Soundwall Cost Estimate
Alternative 2 - HOV**

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	2301

Location: WB I-10 Orange Ave on-ramp
Station: 2607+00.00

Cost Estimate for Barrier S2619 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		231	231	231	231	231	231	231	231	231	Varies
Total Pile Length (ft)		2195	2426	2657	2888	3004	3235	3466	3697	3928	2627
Pile cost (Drill & Cast)	\$50/LF	\$109,762.53	\$121,316.48	\$132,870.43	\$144,424.38	\$150,201.35	\$161,755.30	\$173,309.25	\$184,863.20	\$196,417.15	\$131,348.74
Sound Wall Area (SQFT)		12263	16865	21466	26068	30670	35271	39873	44474	49076	20860
Masonry Cost ²	\$17/SQFT	\$208,474.58	\$286,701.44	\$364,928.30	\$443,155.16	\$521,382.02	\$599,608.88	\$677,835.74	\$756,062.60	\$834,289.46	\$354,625.62
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$975,308.21	\$1,065,089.02	\$1,154,869.83	\$1,244,650.64	\$1,328,654.47	\$1,418,435.28	\$1,508,216.09	\$1,597,996.90	\$1,687,777.71	\$1,143,045.46
Traffic Control	\$11/LF	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69
Contingencies (10%)		\$97,530.82	\$106,508.90	\$115,486.98	\$124,465.06	\$132,865.45	\$141,843.53	\$150,821.61	\$159,799.69	\$168,777.77	\$114,304.55
Total Wall Cost (Masonry)		\$1,099,247.72	\$1,198,006.61	\$1,296,765.50	\$1,395,524.39	\$1,487,928.61	\$1,586,687.50	\$1,685,446.39	\$1,784,205.28	\$1,882,964.17	\$1,283,758.70
Total Wall Cost (Masonry)		\$1,099,000	\$1,198,000	\$1,297,000	\$1,396,000	\$1,488,000	\$1,587,000	\$1,685,000	\$1,784,000	\$1,883,000	\$1,284,000

Design Barrier Length Per Height (FT) 0 801 1002 498 0 0 0 0 0

Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 Orange Ave on-ramp
Station: 2607+00

Wall #: S2619

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1142

Location: EB I-10 between Orange Ave and Church St
Station: 2638+00.00

Cost Estimate for Barrier S2638A (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		115	115	115	115	115	115	115	115	115	Varies
Total Pile Length (ft)		1095	1210	1325	1440	1498	1613	1728	1843	1959	1325
Pile cost (Drill & Cast)	\$50/LF	\$54,725.70	\$60,486.30	\$66,246.90	\$72,007.50	\$74,887.80	\$80,648.40	\$86,409.00	\$92,169.60	\$97,930.20	\$66,246.90
Sound Wall Area (SQFT)		6087	8372	10656	12940	15224	17509	19793	22077	24361	10656
Masonry Cost ²	\$17/SQFT	\$103,487.49	\$142,319.57	\$181,151.65	\$219,983.73	\$258,815.81	\$297,647.89	\$336,479.97	\$375,312.05	\$414,144.13	\$181,151.65
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$461,003.99	\$505,596.67	\$550,189.35	\$594,782.03	\$636,494.41	\$681,087.09	\$725,679.77	\$770,272.45	\$814,865.13	\$550,189.35
Traffic Control	\$11/LF	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32
Contingencies (10%)		\$46,100.40	\$50,559.67	\$55,018.94	\$59,478.20	\$63,649.44	\$68,108.71	\$72,567.98	\$77,027.25	\$81,486.51	\$55,018.94
Total Wall Cost (Masonry)		\$520,767.71	\$569,819.66	\$618,871.61	\$667,923.56	\$713,807.17	\$762,859.12	\$811,911.07	\$860,963.02	\$910,014.97	\$618,871.61
Total Wall Cost (Masonry)		\$520,800	\$569,800	\$618,900	\$667,900	\$713,800	\$762,900	\$811,900	\$861,000	\$910,000	\$618,900

Design Barrier Length Per Height (FT)	0	0	1142	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Orange Ave and Church St
Station: 2638+00

Wall #: S2638A

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	418

Location: EB I-10 between Orange Ave and Church St
Station: 2638+10.00

Cost Estimate for Barrier S2638B (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		43	43	43	43	43	43	43	43	43	Varies
Total Pile Length (ft)		407	449	492	535	556	599	642	685	728	492
Pile cost (Drill & Cast)	\$50/LF	\$20,330.00	\$22,470.00	\$24,610.00	\$26,750.00	\$27,820.00	\$29,960.00	\$32,100.00	\$34,240.00	\$36,380.00	\$24,610.00
Sound Wall Area (SQFT)		2228	3064	3900	4736	5572	6408	7244	8080	8916	3900
Masonry Cost ²	\$17/SQFT	\$37,874.98	\$52,086.98	\$66,298.98	\$80,510.98	\$94,722.98	\$108,934.98	\$123,146.98	\$137,358.98	\$151,570.98	\$66,298.98
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$95,824.98	\$112,176.98	\$128,528.98	\$144,880.98	\$160,162.98	\$176,514.98	\$192,866.98	\$209,218.98	\$225,570.98	\$128,528.98
Traffic Control	\$11/LF	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00
Contingencies (10%)		\$9,582.50	\$11,217.70	\$12,852.90	\$14,488.10	\$16,016.30	\$17,651.50	\$19,286.70	\$20,921.90	\$22,557.10	\$12,852.90
Total Wall Cost (Masonry)		\$111,105.48	\$129,092.68	\$147,079.88	\$165,067.08	\$181,877.28	\$199,864.48	\$217,851.68	\$235,838.88	\$253,826.08	\$147,079.88
Total Wall Cost (Masonry)		\$111,100	\$129,100	\$147,100	\$165,100	\$181,900	\$199,900	\$217,900	\$235,800	\$253,800	\$147,100

Design Barrier Length Per Height (FT)	0	0	418	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Orange Ave and Church St
Station: 2638+10

Wall #: S2638B

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	2798

Location: EB I-10 6th St on-ramp in City of Redlands
Station: 2654+00.00

Cost Estimate for Barrier S2654A (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		281	281	281	281	281	281	281	281	281	Varies
Total Pile Length (ft)		2667	2948	3229	3510	3650	3931	4212	4492	4773	3183
Pile cost (Drill & Cast)	\$50/LF	\$133,368.60	\$147,407.40	\$161,446.20	\$175,485.00	\$182,504.40	\$196,543.20	\$210,582.00	\$224,620.80	\$238,659.60	\$159,157.10
Sound Wall Area (SQFT)		14912	20508	26103	31699	37294	42890	48485	54081	59676	25191
Masonry Cost ²	\$17/SQFT	\$253,505.03	\$348,628.87	\$443,752.71	\$538,876.55	\$634,000.39	\$729,124.23	\$824,248.07	\$919,371.91	\$1,014,495.75	\$428,242.25
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$1,038,672.03	\$1,147,834.67	\$1,256,997.31	\$1,366,159.95	\$1,468,303.19	\$1,577,465.83	\$1,686,628.47	\$1,795,791.11	\$1,904,953.75	\$1,239,197.75
Traffic Control	\$11/LF	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36
Contingencies (10%)		\$103,867.20	\$114,783.47	\$125,699.73	\$136,616.00	\$146,830.32	\$157,746.58	\$168,662.85	\$179,579.11	\$190,495.38	\$123,919.78
Total Wall Cost (Masonry)		\$1,174,414.60	\$1,294,493.50	\$1,414,572.40	\$1,534,651.31	\$1,647,008.87	\$1,767,087.78	\$1,887,166.68	\$2,007,245.58	\$2,127,324.49	\$1,394,992.89
Total Wall Cost (Masonry)		\$1,174,000	\$1,294,000	\$1,415,000	\$1,535,000	\$1,647,000	\$1,767,000	\$1,887,000	\$2,007,000	\$2,127,000	\$1,395,000

Design Barrier Length Per Height (FT)	0	456	2342	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 6th St on-ramp in City of Redlands
Station: 2654+00

Wall #: S2654A

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1898

Location: EB I-10 6th St on-ramp in City of Redlands
Station: 2654+10.00

		Cost Estimate for Barrier S2654B (Alternative #2)									
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		191	191	191	191	191	191	191	191	191	Varies
Total Pile Length (ft)		1813	2003	2194	2385	2480	2671	2862	3053	3244	2194
Pile cost (Drill & Cast)	\$50/LF	\$90,630.00	\$100,170.00	\$109,710.00	\$119,250.00	\$124,020.00	\$133,560.00	\$143,100.00	\$152,640.00	\$162,180.00	\$109,710.00
Sound Wall Area (SQFT)		10116	13912	17708	21504	25300	29096	32892	36688	40484	17708
Masonry Cost ²	\$17/SQFT	\$171,977.78	\$236,509.78	\$301,041.78	\$365,573.78	\$430,105.78	\$494,637.78	\$559,169.78	\$623,701.78	\$688,233.78	\$301,041.78
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$433,427.78	\$507,499.78	\$581,571.78	\$655,643.78	\$724,945.78	\$799,017.78	\$873,089.78	\$947,161.78	\$1,021,233.78	\$581,571.78
Traffic Control	\$11/LF	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00
Contingencies (10%)		\$43,342.78	\$50,749.98	\$58,157.18	\$65,564.38	\$72,494.58	\$79,901.78	\$87,308.98	\$94,716.18	\$102,123.38	\$58,157.18
Total Wall Cost (Masonry)		\$498,748.56	\$580,227.76	\$661,706.96	\$743,186.16	\$819,418.36	\$900,897.56	\$982,376.76	\$1,063,855.96	\$1,145,335.16	\$661,706.96
Total Wall Cost (Masonry)		\$498,700	\$580,200	\$661,700	\$743,200	\$819,400	\$900,900	\$982,400	\$1,064,000	\$1,145,000	\$661,700

Design Barrier Length Per Height (FT)	0	0	1898	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 6th St on-ramp in City of Redlands
Station: 2654+10

Wall #: S2654B

I-10 Corridor Soundwall Cost Estimate Alternative 2 - HOV

Existing Condition	Nothing
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	736

Location: EB Right of Way between Highland Ave and Ford St
Station: 2727+00.00

Cost Estimate for Barrier S2730 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		47	47	50	58	62	68	75	83	93	Varies
Total Pile Length (ft)		400	470	576	663	748	849	970	1118	1302	879
Pile cost (Drill & Cast)	\$50/LF	\$19,981.38	\$23,507.50	\$28,797.53	\$33,139.46	\$37,412.00	\$42,456.82	\$48,505.60	\$55,893.00	\$65,121.00	\$43,925.50
Sound Wall Area (SQFT)		5890	7362	8835	10307	11780	13252	14725	16197	17670	13445
Masonry Cost ²	\$17/SQFT	\$100,128.64	\$125,160.80	\$150,192.96	\$175,225.12	\$200,257.28	\$225,289.44	\$250,321.60	\$275,353.76	\$300,385.92	\$228,570.10
Pile Cap (CY)		71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
Structure Conc. Cost	\$650/CY	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
Structure Excavation Cost	\$65/CY	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00
Wall Cost (Masonry)		\$190,288.92	\$218,847.21	\$249,169.40	\$278,543.49	\$307,848.19	\$337,925.16	\$369,006.11	\$401,425.67	\$435,685.83	\$342,674.51
Traffic Control	\$11/LF	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64
Contingencies (10%)		\$19,028.89	\$21,884.72	\$24,916.94	\$27,854.35	\$30,784.82	\$33,792.52	\$36,900.61	\$40,142.57	\$43,568.58	\$34,267.45
Total Wall Cost (Masonry)		\$218,516.45	\$249,930.57	\$283,284.98	\$315,596.48	\$347,831.64	\$380,916.32	\$415,105.36	\$450,766.87	\$488,453.05	\$386,140.60
Total Wall Cost (Masonry)		\$218,500	\$249,900	\$283,300	\$315,600	\$347,800	\$380,900	\$415,100	\$450,800	\$488,500	\$386,100

Design Barrier Length Per Height (FT)	0	0	47	72	89	61	469	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB Right of Way between Highland Ave and Ford St
Station: 2727+00

Wall #: S2730

**I-10 Corridor Soundwall Cost Estimate
Alternative 2 - HOV**

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	2043

Location: WB Right of Way between Highland Ave and Ford St
Station: 2728+00.00

Cost Estimate for Barrier S2737 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		129	129	137	158	171	187	205	228	256	Varies
Total Pile Length (ft)		1094	1287	1578	1819	2055	2335	2670	3079	3590	2650
Pile cost (Drill & Cast)	\$50/LF	\$54,704.94	\$64,358.75	\$78,908.40	\$90,959.69	\$102,774.00	\$116,731.82	\$133,476.20	\$153,936.00	\$179,504.50	\$132,480.68
Sound Wall Area (SQFT)		16348	20435	24522	28609	32696	36783	40870	44957	49044	39510
Masonry Cost ²	\$17/SQFT	\$277,913.28	\$347,391.60	\$416,869.92	\$486,348.24	\$555,826.56	\$625,304.88	\$694,783.20	\$764,261.52	\$833,739.84	\$671,663.54
Pile Cap (CY)		198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7
Structure Conc. Cost	\$650/CY	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7
Structure Excavation Cost	\$65/CY	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00
Wall Cost (Masonry)		\$523,668.46	\$602,800.59	\$686,828.56	\$768,358.17	\$849,650.80	\$933,086.94	\$1,019,309.64	\$1,109,247.76	\$1,204,294.58	\$995,194.46
Traffic Control	\$11/LF	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28
Contingencies (10%)		\$52,366.85	\$60,280.06	\$68,682.86	\$76,835.82	\$84,965.08	\$93,308.69	\$101,930.96	\$110,924.78	\$120,429.46	\$99,519.45
Total Wall Cost (Masonry)		\$599,613.59	\$686,658.93	\$779,089.70	\$868,772.27	\$958,194.16	\$1,049,973.91	\$1,144,818.89	\$1,243,750.82	\$1,348,302.32	\$1,118,292.19
Total Wall Cost (Masonry)		\$599,600	\$686,700	\$779,100	\$868,800	\$958,200	\$1,050,000	\$1,145,000	\$1,244,000	\$1,348,000	\$1,118,000

Design Barrier Length Per Height (FT)	0	0	0	0	959	62	86	574	363
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Highland Ave and Ford St
Station: 2728+00

Wall #: S2737

**I-10 Corridor Soundwall Cost Estimate
Alternative 2 - HOV**

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1424

Location: WB I-10 edge of shoulder between Ford Ave and Devonshire Dr
Station: 2757+00.00

Cost Estimate for Barrier S2765 (Alternative #2)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		143	143	143	143	143	143	143	143	143	Varies
Total Pile Length (ft)		1362	1505	1649	1792	1864	2007	2150	2294	2437	1792
Pile cost (Drill & Cast)	\$50/LF	\$68,097.43	\$75,265.58	\$82,433.73	\$89,601.88	\$93,185.95	\$100,354.10	\$107,522.25	\$114,690.40	\$121,858.55	\$89,601.88
Sound Wall Area (SQFT)		7588	10435	13282	16130	18977	21824	24672	27519	30366	16130
Masonry Cost ²	\$17/SQFT	\$128,995.11	\$177,398.53	\$225,801.95	\$274,205.37	\$322,608.79	\$371,012.21	\$419,415.63	\$467,819.05	\$516,222.47	\$274,205.37
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$325,219.24	\$380,790.81	\$436,362.38	\$491,933.95	\$543,921.44	\$599,493.01	\$655,064.58	\$710,636.15	\$766,207.72	\$491,933.95
Traffic Control	\$11/LF	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93
Contingencies (10%)		\$32,521.92	\$38,079.08	\$43,636.24	\$49,193.39	\$54,392.14	\$59,949.30	\$65,506.46	\$71,063.62	\$76,620.77	\$49,193.39
Total Wall Cost (Masonry)		\$374,501.09	\$435,629.82	\$496,758.55	\$557,887.27	\$615,073.52	\$676,202.25	\$737,330.97	\$798,459.70	\$859,588.43	\$557,887.27
Total Wall Cost (Masonry)		\$374,500	\$435,600	\$496,800	\$557,900	\$615,100	\$676,200	\$737,300	\$798,500	\$859,600	\$557,900

Design Barrier Length Per Height (FT)	0	0	0	1424	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 edge of shoulder between Ford Ave and Devonshire Dr
Station: 2757+00

Wall #: S2765

Appendix D Alternative 3 – Cost Analysis

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	450

Location: WB I-10 Indian Hill Blvd on-ramp
Station: 699+00.00

Cost Estimate for Barrier S699 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		2400	3301	4201	5102	6003	6903	7804	8705	9605	7405
Masonry Cost ²	\$17/SQFT	\$40,803.50	\$56,114.38	\$71,425.26	\$86,736.14	\$102,047.02	\$117,357.90	\$132,668.78	\$147,979.66	\$163,290.54	\$125,892.24
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF	\$18,012.80	\$18,012.80	\$18,012.80	\$18,012.80	\$18,012.80	\$18,012.80	\$18,012.80	\$18,012.80	\$18,012.80	\$0.00
Retaining Wall Area (SQFT)		1,497.00	1,497.00	1,497.00	1,497.00	1,497.00	1,497.00	1,497.00	1,497.00	1,497.00	0.00
Retaining Wall Cost	\$100/SQFT	\$149,700.00	\$149,700.00	\$149,700.00	\$149,700.00	\$149,700.00	\$149,700.00	\$149,700.00	\$149,700.00	\$149,700.00	\$0.00
Barrier (Type 7365)	\$90/LF	\$40,528.80	\$40,528.80	\$40,528.80	\$40,528.80	\$40,528.80	\$40,528.80	\$40,528.80	\$40,528.80	\$40,528.80	\$0.00
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$29,500.00	\$29,500.00	\$29,500.00	\$29,500.00	\$29,500.00	\$29,500.00	\$29,500.00	\$29,500.00	\$29,500.00	\$1,497.00
Wall Cost (Masonry)		\$278,545.10	\$293,855.98	\$309,166.86	\$324,477.74	\$339,788.62	\$355,099.50	\$370,410.38	\$385,721.26	\$401,032.14	\$363,633.84
Traffic Control	\$11/LF	\$6,053.52	\$6,053.52	\$6,053.52	\$6,053.52	\$6,053.52	\$6,053.52	\$6,053.52	\$6,053.52	\$6,053.52	\$6,053.52
Contingencies (10%)		\$27,854.51	\$29,385.60	\$30,916.69	\$32,447.77	\$33,978.86	\$35,509.95	\$37,041.04	\$38,572.13	\$40,103.21	\$36,363.38
Total Wall Cost (Masonry)		\$312,453.12	\$329,295.09	\$346,137.06	\$362,979.03	\$379,821.00	\$396,662.96	\$413,504.93	\$430,346.90	\$447,188.87	\$406,050.74
Total Wall Cost (Masonry)		\$312,500	\$329,300	\$346,100	\$363,000	\$379,800	\$396,700	\$413,500	\$430,300	\$447,200	\$406,100

Design Barrier Length Per Height (FT)	0	0	0	0	50	100	301	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 Indian Hill Blvd on-ramp
Station: 699+00

Wall #: S699

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	508

Location: EB mainline between Mills Ave and Monte Vista Ave off-ramp
Station: 1002+00.00

Cost Estimate for Barrier SW2 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		2708	3724	4740	5756	6772	7788	8804	9820	10836	5756
Masonry Cost ²	\$17/SQFT	\$46,030.79	\$63,303.13	\$80,575.47	\$97,847.81	\$115,120.15	\$132,392.49	\$149,664.83	\$166,937.17	\$184,209.51	\$97,847.81
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$46,030.79	\$63,303.13	\$80,575.47	\$97,847.81	\$115,120.15	\$132,392.49	\$149,664.83	\$166,937.17	\$184,209.51	\$97,847.81
Traffic Control	\$11/LF	\$6,688.11	\$6,688.11	\$6,688.11	\$6,688.11	\$6,688.11	\$6,688.11	\$6,688.11	\$6,688.11	\$6,688.11	\$6,688.11
Contingencies (10%)		\$4,603.08	\$6,330.31	\$8,057.55	\$9,784.78	\$11,512.01	\$13,239.25	\$14,966.48	\$16,693.72	\$18,420.95	\$9,784.78
Total Wall Cost (Masonry)		\$57,321.97	\$76,321.55	\$95,321.12	\$114,320.70	\$133,320.27	\$152,319.84	\$171,319.42	\$190,318.99	\$209,318.57	\$114,320.70
Total Wall Cost (Masonry)		\$57,320	\$76,320	\$95,320	\$114,300	\$133,300	\$152,300	\$171,300	\$190,300	\$209,300	\$114,300

Design Barrier Length Per Height (FT) 0 0 0 508 0 0 0 0 0 0

Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB mainline between Mills Ave and Monte Vista Ave off-ramp
Station: 1002+00

Wall #: SW2

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	440

Location: EB mainline between Mills Ave and Monte Vista Ave off-ramp
Station: 1006+00.00

Cost Estimate for Barrier SW6 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		2345	3225	4105	4985	5865	6745	7625	8505	9385	4985
Masonry Cost ²	\$17/SQFT	\$39,866.59	\$54,825.91	\$69,785.23	\$84,744.55	\$99,703.87	\$114,663.19	\$129,622.51	\$144,581.83	\$159,541.15	\$84,744.55
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$39,866.59	\$54,825.91	\$69,785.23	\$84,744.55	\$99,703.87	\$114,663.19	\$129,622.51	\$144,581.83	\$159,541.15	\$84,744.55
Traffic Control	\$11/LF	\$5,939.78	\$5,939.78	\$5,939.78	\$5,939.78	\$5,939.78	\$5,939.78	\$5,939.78	\$5,939.78	\$5,939.78	\$5,939.78
Contingencies (10%)		\$3,986.66	\$5,482.59	\$6,978.52	\$8,474.45	\$9,970.39	\$11,466.32	\$12,962.25	\$14,458.18	\$15,954.11	\$8,474.45
Total Wall Cost (Masonry)		\$49,793.03	\$66,248.28	\$82,703.53	\$99,158.78	\$115,614.03	\$132,069.29	\$148,524.54	\$164,979.79	\$181,435.04	\$99,158.78
Total Wall Cost (Masonry)		\$49,790	\$66,250	\$82,700	\$99,160	\$115,600	\$132,100	\$148,500	\$165,000	\$181,400	\$99,160

Design Barrier Length Per Height (FT)	0	0	0	440	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB mainline between Mills Ave and Monte Vista Ave off-ramp
Station: 1006+00

Wall #: SW6

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	986

Location: EB mainline between Mills Ave and Monte Vista Ave off-ramp
Station: 1010+00.00

Cost Estimate for Barrier SW10 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		5254	7226	9197	11169	13141	15112	17084	19055	21027	11169
Masonry Cost ²	\$17/SQFT	\$89,322.43	\$122,839.29	\$156,356.15	\$189,873.01	\$223,389.87	\$256,906.73	\$290,423.59	\$323,940.45	\$357,457.31	\$189,873.01
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$89,322.43	\$122,839.29	\$156,356.15	\$189,873.01	\$223,389.87	\$256,906.73	\$290,423.59	\$323,940.45	\$357,457.31	\$189,873.01
Traffic Control	\$11/LF	\$11,943.69	\$11,943.69	\$11,943.69	\$11,943.69	\$11,943.69	\$11,943.69	\$11,943.69	\$11,943.69	\$11,943.69	\$11,943.69
Contingencies (10%)		\$8,932.24	\$12,283.93	\$15,635.62	\$18,987.30	\$22,338.99	\$25,690.67	\$29,042.36	\$32,394.05	\$35,745.73	\$18,987.30
Total Wall Cost (Masonry)		\$110,198.37	\$147,066.91	\$183,935.46	\$220,804.00	\$257,672.55	\$294,541.10	\$331,409.64	\$368,278.19	\$405,146.73	\$220,804.00
Total Wall Cost (Masonry)		\$110,200	\$147,100	\$183,900	\$220,800	\$257,700	\$294,500	\$331,400	\$368,300	\$405,100	\$220,800

Design Barrier Length Per Height (FT)	0	0	0	986	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location:	EB mainline between Mills Ave and Monte Vista Ave off-ramp
Station:	1010+00

Wall #: SW10

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	SW on BA on piles
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	197

Location: WB I-10 Monte Vista Ave on-ramp
Station: 1029+00.00

Cost Estimate for Barrier SW29 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		1051	1445	1840	2234	2629	3023	3417	3812	4206	2629
Masonry Cost ²	\$17/SQFT	\$17,868.29	\$24,573.09	\$31,277.89	\$37,982.69	\$44,687.49	\$51,392.29	\$58,097.09	\$64,801.89	\$71,506.69	\$44,687.49
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$17,868.29	\$24,573.09	\$31,277.89	\$37,982.69	\$44,687.49	\$51,392.29	\$58,097.09	\$64,801.89	\$71,506.69	\$44,687.49
Traffic Control	\$11/LF	\$3,269.20	\$3,269.20	\$3,269.20	\$3,269.20	\$3,269.20	\$3,269.20	\$3,269.20	\$3,269.20	\$3,269.20	\$3,269.20
Contingencies (10%)		\$1,786.83	\$2,457.31	\$3,127.79	\$3,798.27	\$4,468.75	\$5,139.23	\$5,809.71	\$6,480.19	\$7,150.67	\$4,468.75
Total Wall Cost (Masonry)		\$22,924.32	\$30,299.60	\$37,674.88	\$45,050.16	\$52,425.44	\$59,800.72	\$67,176.00	\$74,551.28	\$81,926.56	\$52,425.44
Total Wall Cost (Masonry)		\$22,920	\$30,300	\$37,670	\$45,050	\$52,430	\$59,800	\$67,180	\$74,550	\$81,930	\$52,430

Design Barrier Length Per Height (FT)	0	0	0	0	197	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 Monte Vista Ave on-ramp
Station: 1029+00

Wall #: SW29

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on BA on piles
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	655

Location: EB mainline between Mills Ave and Monte Vista Ave
Station: 1030+00.00

Cost Estimate for Barrier SW30 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		3490	4800	6110	7420	8729	10039	11349	12659	13968	6110
Masonry Cost ²	\$17/SQFT	\$59,337.77	\$81,603.35	\$103,868.93	\$126,134.51	\$148,400.09	\$170,665.67	\$192,931.25	\$215,196.83	\$237,462.41	\$103,868.93
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$59,337.77	\$81,603.35	\$103,868.93	\$126,134.51	\$148,400.09	\$170,665.67	\$192,931.25	\$215,196.83	\$237,462.41	\$103,868.93
Traffic Control	\$11/LF	\$8,303.57	\$8,303.57	\$8,303.57	\$8,303.57	\$8,303.57	\$8,303.57	\$8,303.57	\$8,303.57	\$8,303.57	\$8,303.57
Contingencies (10%)		\$5,933.78	\$8,160.34	\$10,386.89	\$12,613.45	\$14,840.01	\$17,066.57	\$19,293.13	\$21,519.68	\$23,746.24	\$10,386.89
Total Wall Cost (Masonry)		\$73,575.12	\$98,067.26	\$122,559.39	\$147,051.53	\$171,543.67	\$196,035.81	\$220,527.95	\$245,020.08	\$269,512.22	\$122,559.39
Total Wall Cost (Masonry)		\$73,580	\$98,070	\$122,600	\$147,100	\$171,500	\$196,000	\$220,500	\$245,000	\$269,500	\$122,600

Design Barrier Length Per Height (FT)	0	0	655	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB mainline between Mills Ave and Monte Vista Ave
Station: 1030+00

Wall #: SW30

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on piles
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	452

Location: EB mainline between Central Ave and North Benson Ave
Station: 1066+00.00

Cost Estimate for Barrier SW66 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		2407	3310	4213	5117	6020	6923	7826	8729	9633	5117
Masonry Cost ²	\$17/SQFT	\$40,919.48	\$56,273.88	\$71,628.28	\$86,982.68	\$102,337.08	\$117,691.48	\$133,045.88	\$148,400.28	\$163,754.68	\$86,982.68
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$40,919.48	\$56,273.88	\$71,628.28	\$86,982.68	\$102,337.08	\$117,691.48	\$133,045.88	\$148,400.28	\$163,754.68	\$86,982.68
Traffic Control	\$11/LF	\$6,067.60	\$6,067.60	\$6,067.60	\$6,067.60	\$6,067.60	\$6,067.60	\$6,067.60	\$6,067.60	\$6,067.60	\$6,067.60
Contingencies (10%)		\$4,091.95	\$5,627.39	\$7,162.83	\$8,698.27	\$10,233.71	\$11,769.15	\$13,304.59	\$14,840.03	\$16,375.47	\$8,698.27
Total Wall Cost (Masonry)		\$51,079.02	\$67,968.86	\$84,858.70	\$101,748.54	\$118,638.38	\$135,528.22	\$152,418.06	\$169,307.90	\$186,197.74	\$101,748.54
Total Wall Cost (Masonry)		\$51,080	\$67,970	\$84,860	\$101,700	\$118,600	\$135,500	\$152,400	\$169,300	\$186,200	\$101,700

Design Barrier Length Per Height (FT)	0	0	0	452	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location:	EB mainline between Central Ave and North Benson Ave
Station:	1066+00

Wall #: SW66

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	334

Location: EB I-10 Central Ave on-ramp
Station: 1068+00.00

Cost Estimate for Barrier SW68 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		1781	2450	3118	3787	4455	5124	5792	6460	7129	2450
Masonry Cost ²	\$17/SQFT	\$30,283.67	\$41,647.15	\$53,010.63	\$64,374.11	\$75,737.59	\$87,101.07	\$98,464.55	\$109,828.03	\$121,191.51	\$41,647.15
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$30,283.67	\$41,647.15	\$53,010.63	\$64,374.11	\$75,737.59	\$87,101.07	\$98,464.55	\$109,828.03	\$121,191.51	\$41,647.15
Traffic Control	\$11/LF	\$4,776.42	\$4,776.42	\$4,776.42	\$4,776.42	\$4,776.42	\$4,776.42	\$4,776.42	\$4,776.42	\$4,776.42	\$4,776.42
Contingencies (10%)		\$3,028.37	\$4,164.72	\$5,301.06	\$6,437.41	\$7,573.76	\$8,710.11	\$9,846.46	\$10,982.80	\$12,119.15	\$4,164.72
Total Wall Cost (Masonry)		\$38,088.46	\$50,588.29	\$63,088.12	\$75,587.95	\$88,087.77	\$100,587.60	\$113,087.43	\$125,587.26	\$138,087.09	\$50,588.29
Total Wall Cost (Masonry)		\$38,090	\$50,590	\$63,090	\$75,590	\$88,090	\$100,600	\$113,100	\$125,600	\$138,100	\$50,590

Design Barrier Length Per Height (FT)	0	334	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 Central Ave on-ramp
Station: 1068+00

Wall #: SW68

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	4596

Location: EB mainline between Central Ave and North Mountain Ave
Station: 1072+00.00

Cost Estimate for Barrier SW94 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		24498	33690	42882	52075	61267	70459	79652	88844	98037	51854
Masonry Cost ²	\$17/SQFT	\$416,459.87	\$572,729.99	\$729,000.11	\$885,270.23	\$1,041,540.35	\$1,197,810.47	\$1,354,080.59	\$1,510,350.71	\$1,666,620.83	\$881,524.79
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$416,459.87	\$572,729.99	\$729,000.11	\$885,270.23	\$1,041,540.35	\$1,197,810.47	\$1,354,080.59	\$1,510,350.71	\$1,666,620.83	\$881,524.79
Traffic Control	\$11/LF	\$51,657.98	\$51,657.98	\$51,657.98	\$51,657.98	\$51,657.98	\$51,657.98	\$51,657.98	\$51,657.98	\$51,657.98	\$51,657.98
Contingencies (10%)		\$41,645.99	\$57,273.00	\$72,900.01	\$88,527.02	\$104,154.03	\$119,781.05	\$135,408.06	\$151,035.07	\$166,662.08	\$88,152.48
Total Wall Cost (Masonry)		\$509,763.84	\$681,660.97	\$853,558.10	\$1,025,455.23	\$1,197,352.36	\$1,369,249.50	\$1,541,146.63	\$1,713,043.76	\$1,884,940.89	\$1,021,335.25
Total Wall Cost (Masonry)		\$509,800	\$681,700	\$853,600	\$1,025,000	\$1,197,000	\$1,369,000	\$1,541,000	\$1,713,000	\$1,885,000	\$1,021,000

Design Barrier Length Per Height (FT) 37 0 0 4559 0 0 0 0 0

Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB mainline between Central Ave and North Mountain Ave
Station: 1072+00

Wall #: SW94

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Blockwall
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	222

Location: WB I-10 North Mountain Ave on-ramp
Station: 1117+00.00

Cost Estimate for Barrier S1117 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		15	15	16	18	19	21	23	26	29	Varies
Total Pile Length (ft)		126	149	182	208	234	265	301	346	402	182
Pile cost (Drill & Cast)	\$50/LF	\$6,319.75	\$7,435.00	\$9,081.93	\$10,390.69	\$11,696.00	\$13,234.09	\$15,074.80	\$17,319.00	\$20,118.00	\$9,081.93
Sound Wall Area (SQFT)		1775	2219	2663	3107	3551	3995	4438	4882	5326	2663
Masonry Cost ²	\$17/SQFT	\$30,181.12	\$37,726.40	\$45,271.68	\$52,816.96	\$60,362.24	\$67,907.52	\$75,452.80	\$82,998.08	\$90,543.36	\$45,271.68
Pile Cap (CY)		21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
Structure Conc. Cost	\$650/CY	\$14,024.11	\$14,024.11	\$14,024.11	\$14,024.11	\$14,024.11	\$14,024.11	\$14,024.11	\$14,024.11	\$14,024.11	\$14,024.11
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
Structure Excavation Cost	\$65/CY	\$1,402.41	\$1,402.41	\$1,402.41	\$1,402.41	\$1,402.41	\$1,402.41	\$1,402.41	\$1,402.41	\$1,402.41	\$1,402.41
Remove Exist Wall Cost	\$17/LF	\$3,774.00	\$3,774.00	\$3,774.00	\$3,774.00	\$3,774.00	\$3,774.00	\$3,774.00	\$3,774.00	\$3,774.00	\$3,774.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$15,228.00	\$15,228.00	\$15,228.00	\$15,228.00	\$15,228.00	\$15,228.00	\$15,228.00	\$15,228.00	\$15,228.00	\$15,228.00
Wall Cost (Masonry)		\$70,929.39	\$79,589.92	\$88,782.14	\$97,636.17	\$106,486.76	\$115,570.13	\$124,956.12	\$134,745.60	\$145,089.88	\$88,782.14
Traffic Control	\$11/LF	\$3,541.12	\$3,541.12	\$3,541.12	\$3,541.12	\$3,541.12	\$3,541.12	\$3,541.12	\$3,541.12	\$3,541.12	\$3,541.12
Contingencies (10%)		\$7,092.94	\$7,958.99	\$8,878.21	\$9,763.62	\$10,648.68	\$11,557.01	\$12,495.61	\$13,474.56	\$14,508.99	\$8,878.21
Total Wall Cost (Masonry)		\$81,563.45	\$91,090.03	\$101,201.47	\$110,940.91	\$120,676.56	\$130,668.27	\$140,992.85	\$151,761.28	\$163,139.99	\$101,201.47
Total Wall Cost (Masonry)		\$81,560	\$91,090	\$101,200	\$110,900	\$120,700	\$130,700	\$141,000	\$151,800	\$163,100	\$101,200

Design Barrier Length Per Height (FT)	0	0	222	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 North Mountain Ave on-ramp
Station: 1117+00

Wall #: S1117

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	590

Location: EB I-10 Mountain Ave on-ramp
Station: 1132+00.00

Cost Estimate for Barrier S1132 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		3145	4326	5506	6686	7867	9047	10227	11408	12588	6686
Masonry Cost ²	\$17/SQFT	\$53,473.49	\$73,538.59	\$93,603.69	\$113,668.79	\$133,733.89	\$153,798.99	\$173,864.09	\$193,929.19	\$213,994.29	\$113,668.79
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 7365)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$53,473.49	\$73,538.59	\$93,603.69	\$113,668.79	\$133,733.89	\$153,798.99	\$173,864.09	\$193,929.19	\$213,994.29	\$113,668.79
Traffic Control	\$11/LF	\$7,591.65	\$7,591.65	\$7,591.65	\$7,591.65	\$7,591.65	\$7,591.65	\$7,591.65	\$7,591.65	\$7,591.65	\$7,591.65
Contingencies (10%)		\$5,347.35	\$7,353.86	\$9,360.37	\$11,366.88	\$13,373.39	\$15,379.90	\$17,386.41	\$19,392.92	\$21,399.43	\$11,366.88
Total Wall Cost (Masonry)		\$66,412.49	\$88,484.10	\$110,555.71	\$132,627.32	\$154,698.93	\$176,770.54	\$198,842.15	\$220,913.76	\$242,985.37	\$132,627.32
Total Wall Cost (Masonry)		\$66,410	\$88,480	\$110,600	\$132,600	\$154,700	\$176,800	\$198,800	\$220,900	\$243,000	\$132,600

Design Barrier Length Per Height (FT)	0	0	0	590	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 Mountain Ave on-ramp
Station: 1132+00

Wall #: S1132

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	873

Location: EB Right of Way line between Euclid Ave and Sultana Ave
Station: 1190+00.00

Cost Estimate for Barrier S1190 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		56	56	59	68	74	80	88	98	110	Varies
Total Pile Length (ft)		473	556	681	784	885	1005	1148	1324	1543	565
Pile cost (Drill & Cast)	\$50/LF	\$23,625.48	\$27,794.69	\$34,056.48	\$39,207.48	\$44,271.50	\$50,251.70	\$57,422.95	\$66,182.25	\$77,125.13	\$28,245.88
Sound Wall Area (SQFT)		6987	8734	10481	12228	13975	15722	17469	19215	20962	8565
Masonry Cost ²	\$17/SQFT	\$118,786.48	\$148,483.10	\$178,179.72	\$207,876.34	\$237,572.96	\$267,269.58	\$296,966.20	\$326,662.82	\$356,359.44	\$145,611.12
Pile Cap (CY)		84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9
Structure Conc. Cost	\$650/CY	\$55,195.92	\$55,195.92	\$55,195.92	\$55,195.92	\$55,195.92	\$55,195.92	\$55,195.92	\$55,195.92	\$55,195.92	\$55,195.92
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9
Structure Excavation Cost	\$65/CY	\$5,519.59	\$5,519.59	\$5,519.59	\$5,519.59	\$5,519.59	\$5,519.59	\$5,519.59	\$5,519.59	\$5,519.59	\$5,519.59
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$14,400.00	\$14,400.00	\$14,400.00	\$14,400.00	\$14,400.00	\$14,400.00	\$14,400.00	\$14,400.00	\$14,400.00	\$14,400.00
Wall Cost (Masonry)		\$217,527.48	\$251,393.30	\$287,351.72	\$322,199.34	\$356,959.98	\$392,636.80	\$429,504.67	\$467,960.59	\$508,600.08	\$248,972.52
Traffic Control	\$11/LF	\$10,707.73	\$10,707.73	\$10,707.73	\$10,707.73	\$10,707.73	\$10,707.73	\$10,707.73	\$10,707.73	\$10,707.73	\$10,707.73
Contingencies (10%)		\$21,752.75	\$25,139.33	\$28,735.17	\$32,219.93	\$35,696.00	\$39,263.68	\$42,950.47	\$46,796.06	\$50,860.01	\$24,897.25
Total Wall Cost (Masonry)		\$249,987.96	\$287,240.36	\$326,794.62	\$365,127.00	\$403,363.70	\$442,608.21	\$483,162.86	\$525,464.37	\$570,167.82	\$284,577.50
Total Wall Cost (Masonry)		\$250,000	\$287,200	\$326,800	\$365,100	\$403,400	\$442,600	\$483,200	\$525,500	\$570,200	\$284,600

Design Barrier Length Per Height (FT)

441 76 357 0 0 0 0 0 0

Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB Right of Way line between Euclid Ave and Sultana Ave
Station: 1190+00

Wall #: S1190

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on piles
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1317

Location: EB Right of Way between 6th St and Grove Ave
Station: 1230+00.00

Cost Estimate for Barrier SW230 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		7017	9650	12283	14916	17549	20182	22815	25448	28081	15965
Masonry Cost ²	\$17/SQFT	\$119,289.88	\$164,051.56	\$208,813.24	\$253,574.92	\$298,336.60	\$343,098.28	\$387,859.96	\$432,621.64	\$477,383.32	\$271,406.90
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$119,289.88	\$164,051.56	\$208,813.24	\$253,574.92	\$298,336.60	\$343,098.28	\$387,859.96	\$432,621.64	\$477,383.32	\$271,406.90
Traffic Control	\$11/LF	\$15,581.72	\$15,581.72	\$15,581.72	\$15,581.72	\$15,581.72	\$15,581.72	\$15,581.72	\$15,581.72	\$15,581.72	\$15,581.72
Contingencies (10%)		\$11,928.99	\$16,405.16	\$20,881.32	\$25,357.49	\$29,833.66	\$34,309.83	\$38,786.00	\$43,262.16	\$47,738.33	\$27,140.69
Total Wall Cost (Masonry)		\$146,800.58	\$196,038.43	\$245,276.28	\$294,514.13	\$343,751.98	\$392,989.82	\$442,227.67	\$491,465.52	\$540,703.37	\$314,129.31
Total Wall Cost (Masonry)		\$146,800	\$196,000	\$245,300	\$294,500	\$343,800	\$393,000	\$442,200	\$491,500	\$540,700	\$314,100

Design Barrier Length Per Height (FT)	0	0	0	792	524	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB Right of Way between 6th St and Grove Ave
Station: 1230+00

Wall #: SW230

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on piles
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1178

Location: WB mainline between 6th St and Grove Ave
Station: 1231+00.00

Cost Estimate for Barrier SW231 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		6279	8635	10991	13347	15703	18059	20415	22771	25127	13347
Masonry Cost ²	\$17/SQFT	\$106,740.39	\$146,793.07	\$186,845.75	\$226,898.43	\$266,951.11	\$307,003.79	\$347,056.47	\$387,109.15	\$427,161.83	\$226,898.43
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$106,740.39	\$146,793.07	\$186,845.75	\$226,898.43	\$266,951.11	\$307,003.79	\$347,056.47	\$387,109.15	\$427,161.83	\$226,898.43
Traffic Control	\$11/LF	\$14,058.22	\$14,058.22	\$14,058.22	\$14,058.22	\$14,058.22	\$14,058.22	\$14,058.22	\$14,058.22	\$14,058.22	\$14,058.22
Contingencies (10%)		\$10,674.04	\$14,679.31	\$18,684.58	\$22,689.84	\$26,695.11	\$30,700.38	\$34,705.65	\$38,710.92	\$42,716.18	\$22,689.84
Total Wall Cost (Masonry)		\$131,472.65	\$175,530.60	\$219,588.55	\$263,646.50	\$307,704.44	\$351,762.39	\$395,820.34	\$439,878.29	\$483,936.24	\$263,646.50
Total Wall Cost (Masonry)		\$131,500	\$175,500	\$219,600	\$263,600	\$307,700	\$351,800	\$395,800	\$439,900	\$483,900	\$263,600

Design Barrier Length Per Height (FT)	0	0	0	1178	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB mainline between 6th St and Grove Ave
Station: 1231+00

Wall #: SW231

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	SW on piles
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	175

Location: EB mainline between 6th St and Grove Ave
Station: 1244+00.00

Cost Estimate for Barrier S1244 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		932	1282	1632	1982	2331	2681	3031	3381	3730	1982
Masonry Cost ²	\$17/SQFT	\$15,846.78	\$21,793.04	\$27,739.30	\$33,685.56	\$39,631.82	\$45,578.08	\$51,524.34	\$57,470.60	\$63,416.86	\$33,685.56
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$15,846.78	\$21,793.04	\$27,739.30	\$33,685.56	\$39,631.82	\$45,578.08	\$51,524.34	\$57,470.60	\$63,416.86	\$33,685.56
Traffic Control	\$11/LF	\$3,023.79	\$3,023.79	\$3,023.79	\$3,023.79	\$3,023.79	\$3,023.79	\$3,023.79	\$3,023.79	\$3,023.79	\$3,023.79
Contingencies (10%)		\$1,584.68	\$2,179.30	\$2,773.93	\$3,368.56	\$3,963.18	\$4,557.81	\$5,152.43	\$5,747.06	\$6,341.69	\$3,368.56
Total Wall Cost (Masonry)		\$20,455.25	\$26,996.14	\$33,537.02	\$40,077.91	\$46,618.80	\$53,159.68	\$59,700.57	\$66,241.45	\$72,782.34	\$40,077.91
Total Wall Cost (Masonry)		\$20,460	\$27,000	\$33,540	\$40,080	\$46,620	\$53,160	\$59,700	\$66,240	\$72,780	\$40,080

Design Barrier Length Per Height (FT)	0	0	0	175	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB mainline between 6th St and Grove Ave
Station: 1244+00

Wall #: S1244

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1474

Location: WB mainline between 6th St and Grove Ave
Station: 1245+00.00

Cost Estimate for Barrier SW245 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		7854	10801	13748	16695	19642	22589	25536	28483	31430	16695
Masonry Cost ²	\$17/SQFT	\$133,516.55	\$183,616.57	\$233,716.59	\$283,816.61	\$333,916.63	\$384,016.65	\$434,116.67	\$484,216.69	\$534,316.71	\$283,816.61
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$133,516.55	\$183,616.57	\$233,716.59	\$283,816.61	\$333,916.63	\$384,016.65	\$434,116.67	\$484,216.69	\$534,316.71	\$283,816.61
Traffic Control	\$11/LF	\$17,308.83	\$17,308.83	\$17,308.83	\$17,308.83	\$17,308.83	\$17,308.83	\$17,308.83	\$17,308.83	\$17,308.83	\$17,308.83
Contingencies (10%)		\$13,351.66	\$18,361.66	\$23,371.66	\$28,381.66	\$33,391.66	\$38,401.67	\$43,411.67	\$48,421.67	\$53,431.67	\$28,381.66
Total Wall Cost (Masonry)		\$164,177.04	\$219,287.06	\$274,397.08	\$329,507.10	\$384,617.13	\$439,727.15	\$494,837.17	\$549,947.19	\$605,057.21	\$329,507.10
Total Wall Cost (Masonry)		\$164,200	\$219,300	\$274,400	\$329,500	\$384,600	\$439,700	\$494,800	\$549,900	\$605,100	\$329,500

Design Barrier Length Per Height (FT)	0	0	0	1474	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB mainline between 6th St and Grove Ave
Station: 1245+00

Wall #: SW245

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on BA on piles
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	599

Location: EB mainline between 6th St and Grove Ave
Station: 1246+00.00

Cost Estimate for Barrier SW246 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		3191	4389	5587	6784	7982	9179	10377	11574	12772	6784
Masonry Cost ²	\$17/SQFT	\$54,254.55	\$74,612.73	\$94,970.91	\$115,329.09	\$135,687.27	\$156,045.45	\$176,403.63	\$196,761.81	\$217,119.99	\$115,329.09
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$54,254.55	\$74,612.73	\$94,970.91	\$115,329.09	\$135,687.27	\$156,045.45	\$176,403.63	\$196,761.81	\$217,119.99	\$115,329.09
Traffic Control	\$11/LF	\$7,686.47	\$7,686.47	\$7,686.47	\$7,686.47	\$7,686.47	\$7,686.47	\$7,686.47	\$7,686.47	\$7,686.47	\$7,686.47
Contingencies (10%)		\$5,425.45	\$7,461.27	\$9,497.09	\$11,532.91	\$13,568.73	\$15,604.54	\$17,640.36	\$19,676.18	\$21,712.00	\$11,532.91
Total Wall Cost (Masonry)		\$67,366.47	\$89,760.47	\$112,154.47	\$134,548.47	\$156,942.47	\$179,336.46	\$201,730.46	\$224,124.46	\$246,518.46	\$134,548.47
Total Wall Cost (Masonry)		\$67,370	\$89,760	\$112,200	\$134,500	\$156,900	\$179,300	\$201,700	\$224,100	\$246,500	\$134,500

Design Barrier Length Per Height (FT)	0	0	0	599	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB mainline between 6th St and Grove Ave
Station: 1246+00

Wall #: SW246

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on BA on piles
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	775

Location: WB I-10 4th St on-ramp
Station: 1259+00.00

Cost Estimate for Barrier SW259 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		4131	5681	7231	8781	10332	11882	13432	14982	16532	8781
Masonry Cost ²	\$17/SQFT	\$70,228.19	\$96,580.23	\$122,932.27	\$149,284.31	\$175,636.35	\$201,988.39	\$228,340.43	\$254,692.47	\$281,044.51	\$149,284.31
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$70,228.19	\$96,580.23	\$122,932.27	\$149,284.31	\$175,636.35	\$201,988.39	\$228,340.43	\$254,692.47	\$281,044.51	\$149,284.31
Traffic Control	\$11/LF	\$9,625.66	\$9,625.66	\$9,625.66	\$9,625.66	\$9,625.66	\$9,625.66	\$9,625.66	\$9,625.66	\$9,625.66	\$9,625.66
Contingencies (10%)		\$7,022.82	\$9,658.02	\$12,293.23	\$14,928.43	\$17,563.63	\$20,198.84	\$22,834.04	\$25,469.25	\$28,104.45	\$14,928.43
Total Wall Cost (Masonry)		\$86,876.67	\$115,863.91	\$144,851.15	\$173,838.40	\$202,825.64	\$231,812.89	\$260,800.13	\$289,787.37	\$318,774.62	\$173,838.40
Total Wall Cost (Masonry)		\$86,880	\$115,900	\$144,900	\$173,800	\$202,800	\$231,800	\$260,800	\$289,800	\$318,800	\$173,800

Design Barrier Length Per Height (FT)	0	0	0	775	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 4th St on-ramp
Station: 1259+00

Wall #: SW259

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	297

Location: EB I-10 between Grove Ave and 4th St
Station: 1262+00.00

Cost Estimate for Barrier S1262 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		1586	2181	2775	3370	3965	4560	5155	5750	6345	3370
Masonry Cost ²	\$17/SQFT	\$26,954.66	\$37,068.98	\$47,183.30	\$57,297.62	\$67,411.94	\$77,526.26	\$87,640.58	\$97,754.90	\$107,869.22	\$57,297.62
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 7365)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$26,954.66	\$37,068.98	\$47,183.30	\$57,297.62	\$67,411.94	\$77,526.26	\$87,640.58	\$97,754.90	\$107,869.22	\$57,297.62
Traffic Control	\$11/LF	\$4,372.28	\$4,372.28	\$4,372.28	\$4,372.28	\$4,372.28	\$4,372.28	\$4,372.28	\$4,372.28	\$4,372.28	\$4,372.28
Contingencies (10%)		\$2,695.47	\$3,706.90	\$4,718.33	\$5,729.76	\$6,741.19	\$7,752.63	\$8,764.06	\$9,775.49	\$10,786.92	\$5,729.76
Total Wall Cost (Masonry)		\$34,022.41	\$45,148.16	\$56,273.91	\$67,399.67	\$78,525.42	\$89,651.17	\$100,776.92	\$111,902.67	\$123,028.43	\$67,399.67
Total Wall Cost (Masonry)		\$34,020	\$45,150	\$56,270	\$67,400	\$78,530	\$89,650	\$100,800	\$111,900	\$123,000	\$67,400

Design Barrier Length Per Height (FT)	0	0	0	297	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Grove Ave and 4th St
Station: 1262+00

Wall #: S1262

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	484

Location: EB I-10 4th St off-ramp
Station: 1266+00.00

Cost Estimate for Barrier S1266 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		2582	3551	4519	5488	6457	7426	8394	9363	10332	4519
Masonry Cost ²	\$17/SQFT	\$43,890.58	\$60,359.84	\$76,829.10	\$93,298.36	\$109,767.62	\$126,236.88	\$142,706.14	\$159,175.40	\$175,644.66	\$76,829.10
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$43,890.58	\$60,359.84	\$76,829.10	\$93,298.36	\$109,767.62	\$126,236.88	\$142,706.14	\$159,175.40	\$175,644.66	\$76,829.10
Traffic Control	\$11/LF	\$6,428.29	\$6,428.29	\$6,428.29	\$6,428.29	\$6,428.29	\$6,428.29	\$6,428.29	\$6,428.29	\$6,428.29	\$6,428.29
Contingencies (10%)		\$4,389.06	\$6,035.98	\$7,682.91	\$9,329.84	\$10,976.76	\$12,623.69	\$14,270.61	\$15,917.54	\$17,564.47	\$7,682.91
Total Wall Cost (Masonry)		\$54,707.93	\$72,824.11	\$90,940.30	\$109,056.48	\$127,172.67	\$145,288.86	\$163,405.04	\$181,521.23	\$199,637.41	\$90,940.30
Total Wall Cost (Masonry)		\$54,710	\$72,820	\$90,940	\$109,100	\$127,200	\$145,300	\$163,400	\$181,500	\$199,600	\$90,940

Design Barrier Length Per Height (FT)	0	0	484	0	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 4th St off-ramp
Station: 1266+00

Wall #: S1266

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	898

Location: WB mainline between 4th St off-ramp and on-ramp
Station: 1275+00.00

Cost Estimate for Barrier SW275 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		4785	6580	8375	10171	11966	13761	15557	17352	19148	10171
Masonry Cost ²	\$17/SQFT	\$81,338.78	\$111,859.90	\$142,381.02	\$172,902.14	\$203,423.26	\$233,944.38	\$264,465.50	\$294,986.62	\$325,507.74	\$172,902.14
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 7365)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$81,338.78	\$111,859.90	\$142,381.02	\$172,902.14	\$203,423.26	\$233,944.38	\$264,465.50	\$294,986.62	\$325,507.74	\$172,902.14
Traffic Control	\$11/LF	\$10,974.48	\$10,974.48	\$10,974.48	\$10,974.48	\$10,974.48	\$10,974.48	\$10,974.48	\$10,974.48	\$10,974.48	\$10,974.48
Contingencies (10%)		\$8,133.88	\$11,185.99	\$14,238.10	\$17,290.21	\$20,342.33	\$23,394.44	\$26,446.55	\$29,498.66	\$32,550.77	\$17,290.21
Total Wall Cost (Masonry)		\$100,447.14	\$134,020.38	\$167,593.61	\$201,166.84	\$234,740.07	\$268,313.30	\$301,886.54	\$335,459.77	\$369,033.00	\$201,166.84
Total Wall Cost (Masonry)		\$100,400	\$134,000	\$167,600	\$201,200	\$234,700	\$268,300	\$301,900	\$335,500	\$369,000	\$201,200

Design Barrier Length Per Height (FT) 0 0 0 898 0 0 0 0 0

Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB mainline between 4th St off-ramp and on-ramp
Station: 1275+00

Wall #: SW275

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	216

Location: EB I-10 4th St on-ramp
Station: 1276+00.00

Cost Estimate for Barrier S1276 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		1151	1582	2014	2446	2878	3309	3741	4173	4605	1151
Masonry Cost ²	\$17/SQFT	\$19,560.89	\$26,900.81	\$34,240.73	\$41,580.65	\$48,920.57	\$56,260.49	\$63,600.41	\$70,940.33	\$78,280.25	\$19,560.89
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$19,560.89	\$26,900.81	\$34,240.73	\$41,580.65	\$48,920.57	\$56,260.49	\$63,600.41	\$70,940.33	\$78,280.25	\$19,560.89
Traffic Control	\$11/LF	\$3,474.68	\$3,474.68	\$3,474.68	\$3,474.68	\$3,474.68	\$3,474.68	\$3,474.68	\$3,474.68	\$3,474.68	\$3,474.68
Contingencies (10%)		\$1,956.09	\$2,690.08	\$3,424.07	\$4,158.06	\$4,892.06	\$5,626.05	\$6,360.04	\$7,094.03	\$7,828.02	\$1,956.09
Total Wall Cost (Masonry)		\$24,991.66	\$33,065.57	\$41,139.48	\$49,213.39	\$57,287.30	\$65,361.22	\$73,435.13	\$81,509.04	\$89,582.95	\$24,991.66
Total Wall Cost (Masonry)		\$24,990	\$33,070	\$41,140	\$49,210	\$57,290	\$65,360	\$73,440	\$81,510	\$89,580	\$24,990

Design Barrier Length Per Height (FT)	216	0	0	0	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 4th St on-ramp
Station: 1276+00

Wall #: S1276

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Blockwall
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	407

Location: WB I-10 4th St off-ramp
Station: 1285+00.00

Cost Estimate for Barrier S1285 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		2170	2984	3798	4612	5427	6241	7055	7869	8683	4612
Masonry Cost ²	\$17/SQFT	\$36,886.42	\$50,727.48	\$64,568.54	\$78,409.60	\$92,250.66	\$106,091.72	\$119,932.78	\$133,773.84	\$147,614.90	\$78,409.60
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$36,886.42	\$50,727.48	\$64,568.54	\$78,409.60	\$92,250.66	\$106,091.72	\$119,932.78	\$133,773.84	\$147,614.90	\$78,409.60
Traffic Control	\$11/LF	\$5,577.99	\$5,577.99	\$5,577.99	\$5,577.99	\$5,577.99	\$5,577.99	\$5,577.99	\$5,577.99	\$5,577.99	\$5,577.99
Contingencies (10%)		\$3,688.64	\$5,072.75	\$6,456.85	\$7,840.96	\$9,225.07	\$10,609.17	\$11,993.28	\$13,377.38	\$14,761.49	\$7,840.96
Total Wall Cost (Masonry)		\$46,153.06	\$61,378.22	\$76,603.39	\$91,828.56	\$107,053.72	\$122,278.89	\$137,504.05	\$152,729.22	\$167,954.39	\$91,828.56
Total Wall Cost (Masonry)		\$46,150	\$61,380	\$76,600	\$91,830	\$107,100	\$122,300	\$137,500	\$152,700	\$168,000	\$91,830

Design Barrier Length Per Height (FT)	0	0	0	407	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 4th St off-ramp
Station: 1285+00

Wall #: S1285

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1840

Location: EB 4th St on-ramp and EB mainline between 4th St and Vineyard Ave
Station: 1286+00.00

Cost Estimate for Barrier SW278 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		9806	13486	17166	20846	24525	28205	31885	35564	39244	23162
Masonry Cost ²	\$17/SQFT	\$166,708.81	\$229,263.71	\$291,818.61	\$354,373.51	\$416,928.41	\$479,483.31	\$542,038.21	\$604,593.11	\$667,148.01	\$393,762.17
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$166,708.81	\$229,263.71	\$291,818.61	\$354,373.51	\$416,928.41	\$479,483.31	\$542,038.21	\$604,593.11	\$667,148.01	\$393,762.17
Traffic Control	\$11/LF	\$21,338.35	\$21,338.35	\$21,338.35	\$21,338.35	\$21,338.35	\$21,338.35	\$21,338.35	\$21,338.35	\$21,338.35	\$21,338.35
Contingencies (10%)		\$16,670.88	\$22,926.37	\$29,181.86	\$35,437.35	\$41,692.84	\$47,948.33	\$54,203.82	\$60,459.31	\$66,714.80	\$39,376.22
Total Wall Cost (Masonry)		\$204,718.04	\$273,528.43	\$342,338.82	\$411,149.21	\$479,959.60	\$548,769.99	\$617,580.38	\$686,390.77	\$755,201.16	\$454,476.74
Total Wall Cost (Masonry)		\$204,700	\$273,500	\$342,300	\$411,100	\$480,000	\$548,800	\$617,600	\$686,400	\$755,200	\$454,500

Design Barrier Length Per Height (FT)	0	0	0	681	1158	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location:	EB 4th St on-ramp and EB mainline between 4th St and Vineyard Ave
Station:	1286+00

Wall #: SW278

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Fence
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	2448

Location: EB I-10 and Vineyard off-ramp between 4th St and Vineyard Ave
Station: 1306+00.00

Cost Estimate for Barrier S1306 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		13045	17940	22835	27730	32625	37520	42415	47310	52205	23121
Masonry Cost ²	\$17/SQFT	\$221,767.98	\$304,982.98	\$388,197.98	\$471,412.98	\$554,627.98	\$637,842.98	\$721,057.98	\$804,272.98	\$887,487.98	\$393,050.46
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$221,767.98	\$304,982.98	\$388,197.98	\$471,412.98	\$554,627.98	\$637,842.98	\$721,057.98	\$804,272.98	\$887,487.98	\$393,050.46
Traffic Control	\$11/LF	\$28,022.50	\$28,022.50	\$28,022.50	\$28,022.50	\$28,022.50	\$28,022.50	\$28,022.50	\$28,022.50	\$28,022.50	\$28,022.50
Contingencies (10%)		\$22,176.80	\$30,498.30	\$38,819.80	\$47,141.30	\$55,462.80	\$63,784.30	\$72,105.80	\$80,427.30	\$88,748.80	\$39,305.05
Total Wall Cost (Masonry)		\$271,967.27	\$363,503.77	\$455,040.27	\$546,576.77	\$638,113.27	\$729,649.77	\$821,186.27	\$912,722.77	\$1,004,259.27	\$460,378.00
Total Wall Cost (Masonry)		\$272,000	\$363,500	\$455,000	\$546,600	\$638,100	\$729,600	\$821,200	\$912,700	\$1,004,000	\$460,400

Design Barrier Length Per Height (FT)	0	1102	101	1245	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location:	EB I-10 and Vineyard off-ramp between 4th St and Vineyard Ave
Station:	1306+00

Wall #: S1306

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	SW on piles
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	832

Location: WB mainline between 4th St and Vineyard Ave
Station: 1309+00.00

Cost Estimate for Barrier SW296 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		84	84	84	84	84	84	84	84	84	Varies
Total Pile Length (ft)		800	884	969	1053	1095	1179	1263	1348	1432	1053
Pile cost (Drill & Cast)	\$50/LF	\$40,006.40	\$44,217.60	\$48,428.80	\$52,640.00	\$54,745.60	\$58,956.80	\$63,168.00	\$67,379.20	\$71,590.40	\$52,640.00
Sound Wall Area (SQFT)		4436	6100	7765	9429	11094	12758	14423	16087	17752	9429
Masonry Cost ²	\$17/SQFT	\$75,409.27	\$103,705.43	\$132,001.59	\$160,297.75	\$188,593.91	\$216,890.07	\$245,186.23	\$273,482.39	\$301,778.55	\$160,297.75
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$14,161.00	\$14,161.00	\$14,161.00	\$14,161.00	\$14,161.00	\$14,161.00	\$14,161.00	\$14,161.00	\$14,161.00	\$14,161.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$50,300.00	\$50,300.00	\$50,300.00	\$50,300.00	\$50,300.00	\$50,300.00	\$50,300.00	\$50,300.00	\$50,300.00	\$50,300.00
Wall Cost (Masonry)		\$179,876.67	\$212,384.03	\$244,891.39	\$277,398.75	\$307,800.51	\$340,307.87	\$372,815.23	\$405,322.59	\$437,829.95	\$277,398.75
Traffic Control	\$11/LF	\$10,254.64	\$10,254.64	\$10,254.64	\$10,254.64	\$10,254.64	\$10,254.64	\$10,254.64	\$10,254.64	\$10,254.64	\$10,254.64
Contingencies (10%)		\$17,987.67	\$21,238.40	\$24,489.14	\$27,739.87	\$30,780.05	\$34,030.79	\$37,281.52	\$40,532.26	\$43,782.99	\$27,739.87
Total Wall Cost (Masonry)		\$208,118.97	\$243,877.07	\$279,635.17	\$315,393.26	\$348,835.20	\$384,593.29	\$420,351.39	\$456,109.49	\$491,867.58	\$315,393.26
Total Wall Cost (Masonry)		\$208,100	\$243,900	\$279,600	\$315,400	\$348,800	\$384,600	\$420,400	\$456,100	\$491,900	\$315,400

Design Barrier Length Per Height (FT)	0	0	0	832	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB mainline between 4th St and Vineyard Ave
Station: 1309+00

Wall #: SW296

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	464

Location: WB I-10 Vineyard on-ramp
Station: 1319+00.00

Cost Estimate for Barrier S21 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		30	30	32	37	40	43	47	53	59	Varies
Total Pile Length (ft)		255	300	367	422	476	539	616	709	825	367
Pile cost (Drill & Cast)	\$50/LF	\$12,738.58	\$14,986.56	\$18,345.18	\$21,079.06	\$23,778.50	\$26,964.20	\$30,782.05	\$35,442.75	\$41,262.38	\$18,345.18
Sound Wall Area (SQFT)		3709	4636	5563	6490	7417	8344	9271	10199	11126	5563
Masonry Cost ²	\$17/SQFT	\$63,045.52	\$78,806.90	\$94,568.28	\$110,329.66	\$126,091.04	\$141,852.42	\$157,613.80	\$173,375.18	\$189,136.56	\$94,568.28
Pile Cap (CY)		45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1
Structure Conc. Cost	\$650/CY	\$29,295.05	\$29,295.05	\$29,295.05	\$29,295.05	\$29,295.05	\$29,295.05	\$29,295.05	\$29,295.05	\$29,295.05	\$29,295.05
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1
Structure Excavation Cost	\$65/CY	\$2,929.50	\$2,929.50	\$2,929.50	\$2,929.50	\$2,929.50	\$2,929.50	\$2,929.50	\$2,929.50	\$2,929.50	\$2,929.50
Remove Exist Wall Cost	\$17/LF	\$1,445.00	\$1,445.00	\$1,445.00	\$1,445.00	\$1,445.00	\$1,445.00	\$1,445.00	\$1,445.00	\$1,445.00	\$1,445.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$109,453.65	\$127,463.02	\$146,583.02	\$165,078.27	\$183,539.09	\$202,486.18	\$222,065.40	\$242,487.48	\$264,068.49	\$146,583.02
Traffic Control	\$11/LF	\$6,199.27	\$6,199.27	\$6,199.27	\$6,199.27	\$6,199.27	\$6,199.27	\$6,199.27	\$6,199.27	\$6,199.27	\$6,199.27
Contingencies (10%)		\$10,945.37	\$12,746.30	\$14,658.30	\$16,507.83	\$18,353.91	\$20,248.62	\$22,206.54	\$24,248.75	\$26,406.85	\$14,658.30
Total Wall Cost (Masonry)		\$126,598.29	\$146,408.59	\$167,440.59	\$187,785.37	\$208,092.27	\$228,934.07	\$250,471.21	\$272,935.50	\$296,674.61	\$167,440.59
Total Wall Cost (Masonry)		\$126,600	\$146,400	\$167,400	\$187,800	\$208,100	\$228,900	\$250,500	\$272,900	\$296,700	\$167,400

Design Barrier Length Per Height (FT)	0	0	464	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 Vineyard on-ramp
Station: 1319+00

Wall #: S21

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on BA on piles
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	580

Location: EB I-10 Vineyard Ave on-ramp
Station: 1334+00.00

Cost Estimate for Barrier SW334 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		3091	4251	5411	6571	7731	8891	10051	11211	12371	6571
Masonry Cost ²	\$17/SQFT	\$52,551.99	\$72,271.31	\$91,990.63	\$111,709.95	\$131,429.27	\$151,148.59	\$170,867.91	\$190,587.23	\$210,306.55	\$111,709.95
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$52,551.99	\$72,271.31	\$91,990.63	\$111,709.95	\$131,429.27	\$151,148.59	\$170,867.91	\$190,587.23	\$210,306.55	\$111,709.95
Traffic Control	\$11/LF	\$7,479.78	\$7,479.78	\$7,479.78	\$7,479.78	\$7,479.78	\$7,479.78	\$7,479.78	\$7,479.78	\$7,479.78	\$7,479.78
Contingencies (10%)		\$5,255.20	\$7,227.13	\$9,199.06	\$11,170.99	\$13,142.93	\$15,114.86	\$17,086.79	\$19,058.72	\$21,030.65	\$11,170.99
Total Wall Cost (Masonry)		\$65,286.97	\$86,978.22	\$108,669.47	\$130,360.72	\$152,051.97	\$173,743.23	\$195,434.48	\$217,125.73	\$238,816.98	\$130,360.72
Total Wall Cost (Masonry)		\$65,290	\$86,980	\$108,700	\$130,400	\$152,100	\$173,700	\$195,400	\$217,100	\$238,800	\$130,400

Design Barrier Length Per Height (FT)	0	0	0	580	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 Vineyard Ave on-ramp
Station: 1334+00

Wall #: SW334

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	SW on piles
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	3738

Location: WB Right of Way between Cherry Ave and Citrus Ave
Station: 1707+00.00

Cost Estimate for Barrier SW697 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		375	375	375	375	375	375	375	375	375	Varies
Total Pile Length (ft)		3561	3936	4310	4685	4873	5247	5622	5997	6372	4685
Pile cost (Drill & Cast)	\$50/LF	\$178,036.65	\$196,777.35	\$215,518.05	\$234,258.75	\$243,629.10	\$262,369.80	\$281,110.50	\$299,851.20	\$318,591.90	\$234,258.75
Sound Wall Area (SQFT)		19924	27401	34877	42353	49829	57306	64782	72258	79735	42353
Masonry Cost ²	\$17/SQFT	\$338,712.87	\$465,809.63	\$592,906.39	\$720,003.15	\$847,099.91	\$974,196.67	\$1,101,293.43	\$1,228,390.19	\$1,355,486.95	\$720,003.15
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$336,432.60	\$336,432.60	\$336,432.60	\$336,432.60	\$336,432.60	\$336,432.60	\$336,432.60	\$336,432.60	\$336,432.60	\$336,432.60
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$853,182.12	\$999,019.58	\$1,144,857.04	\$1,290,694.50	\$1,427,161.61	\$1,572,999.07	\$1,718,836.53	\$1,864,673.99	\$2,010,511.45	\$1,290,694.50
Traffic Control	\$11/LF	\$42,219.54	\$42,219.54	\$42,219.54	\$42,219.54	\$42,219.54	\$42,219.54	\$42,219.54	\$42,219.54	\$42,219.54	\$42,219.54
Contingencies (10%)		\$85,318.21	\$99,901.96	\$114,485.70	\$129,069.45	\$142,716.16	\$157,299.91	\$171,883.65	\$186,467.40	\$201,051.14	\$129,069.45
Total Wall Cost (Masonry)		\$980,719.87	\$1,141,141.07	\$1,301,562.28	\$1,461,983.48	\$1,612,097.31	\$1,772,518.51	\$1,932,939.72	\$2,093,360.92	\$2,253,782.13	\$1,461,983.48
Total Wall Cost (Masonry)		\$980,700	\$1,141,000	\$1,302,000	\$1,462,000	\$1,612,000	\$1,773,000	\$1,933,000	\$2,093,000	\$2,254,000	\$1,462,000

Design Barrier Length Per Height (FT)	0	0	0	3738	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Cherry Ave and Citrus Ave
Station: 1707+00

Wall #: SW697

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	2055

Location: WB Right of Way between Citrus Ave and Cypress Ave
Station: 1819+00.00

Cost Estimate for Barrier S1819 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		129	129	138	159	172	188	206	229	258	Varies
Total Pile Length (ft)		1100	1294	1587	1829	2067	2348	2684	3096	3610	2151
Pile cost (Drill & Cast)	\$50/LF	\$55,006.16	\$64,713.13	\$79,343.10	\$91,461.27	\$103,341.00	\$117,376.14	\$134,213.30	\$154,786.50	\$180,496.75	\$107,533.54
Sound Wall Area (SQFT)		16439	20548	24658	28767	32877	36987	41096	45206	49316	34105
Masonry Cost ²	\$17/SQFT	\$279,455.52	\$349,319.40	\$419,183.28	\$489,047.16	\$558,911.04	\$628,774.92	\$698,638.80	\$768,502.68	\$838,366.56	\$579,780.58
Pile Cap (CY)		199.8	199.8	199.8	199.8	199.8	199.8	199.8	199.8	199.8	199.8
Structure Conc. Cost	\$650/CY	\$129,853.21	\$129,853.21	\$129,853.21	\$129,853.21	\$129,853.21	\$129,853.21	\$129,853.21	\$129,853.21	\$129,853.21	\$129,853.21
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		199.8	199.8	199.8	199.8	199.8	199.8	199.8	199.8	199.8	199.8
Structure Excavation Cost	\$65/CY	\$12,985.32	\$12,985.32	\$12,985.32	\$12,985.32	\$12,985.32	\$12,985.32	\$12,985.32	\$12,985.32	\$12,985.32	\$12,985.32
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$56,600.00	\$56,600.00	\$56,600.00	\$56,600.00	\$56,600.00	\$56,600.00	\$56,600.00	\$56,600.00	\$56,600.00	\$56,600.00
Wall Cost (Masonry)		\$533,900.21	\$613,471.05	\$697,964.91	\$779,946.96	\$861,690.57	\$945,589.59	\$1,032,290.63	\$1,122,727.71	\$1,218,301.84	\$886,752.65
Traffic Control	\$11/LF	\$23,703.02	\$23,703.02	\$23,703.02	\$23,703.02	\$23,703.02	\$23,703.02	\$23,703.02	\$23,703.02	\$23,703.02	\$23,703.02
Contingencies (10%)		\$53,390.02	\$61,347.11	\$69,796.49	\$77,994.70	\$86,169.06	\$94,558.96	\$103,229.06	\$112,272.77	\$121,830.18	\$88,675.26
Total Wall Cost (Masonry)		\$610,993.25	\$698,521.18	\$791,464.42	\$881,644.67	\$971,562.65	\$1,063,851.56	\$1,159,222.71	\$1,258,703.50	\$1,363,835.04	\$999,130.93
Total Wall Cost (Masonry)		\$611,000	\$698,500	\$791,500	\$881,600	\$971,600	\$1,064,000	\$1,159,000	\$1,259,000	\$1,364,000	\$999,100

Design Barrier Length Per Height (FT)	0	0	0	0	1441	614	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Citrus Ave and Cypress Ave
Station: 1819+00

Wall #: S1819

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	Fence
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	707

Location: WB Right of Way between Cypress Ave and Sierra Ave
Station: 1833+00.00

Cost Estimate for Barrier S1833 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		72	72	72	72	72	72	72	72	72	Varies
Total Pile Length (ft)		681	753	824	896	932	1003	1075	1147	1218	896
Pile cost (Drill & Cast)	\$50/LF	\$34,041.83	\$37,625.18	\$41,208.53	\$44,791.88	\$46,583.55	\$50,166.90	\$53,750.25	\$57,333.60	\$60,916.95	\$44,791.88
Sound Wall Area (SQFT)		3767	5180	6593	8007	9420	10833	12247	13660	15073	8007
Masonry Cost ²	\$17/SQFT	\$64,031.37	\$88,058.15	\$112,084.93	\$136,111.71	\$160,138.49	\$184,165.27	\$208,192.05	\$232,218.83	\$256,245.61	\$136,111.71
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$63,600.30	\$63,600.30	\$63,600.30	\$63,600.30	\$63,600.30	\$63,600.30	\$63,600.30	\$63,600.30	\$63,600.30	\$63,600.30
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00	\$27,400.00
Wall Cost (Masonry)		\$189,073.49	\$216,683.62	\$244,293.75	\$271,903.88	\$297,722.34	\$325,332.47	\$352,942.60	\$380,552.73	\$408,162.86	\$271,903.88
Traffic Control	\$11/LF	\$8,873.37	\$8,873.37	\$8,873.37	\$8,873.37	\$8,873.37	\$8,873.37	\$8,873.37	\$8,873.37	\$8,873.37	\$8,873.37
Contingencies (10%)		\$18,907.35	\$21,668.36	\$24,429.38	\$27,190.39	\$29,772.23	\$32,533.25	\$35,294.26	\$38,055.27	\$40,816.29	\$27,190.39
Total Wall Cost (Masonry)		\$216,854.21	\$247,225.36	\$277,596.50	\$307,967.64	\$336,367.94	\$366,739.09	\$397,110.23	\$427,481.37	\$457,852.51	\$307,967.64
Total Wall Cost (Masonry)		\$216,900	\$247,200	\$277,600	\$308,000	\$336,400	\$366,700	\$397,100	\$427,500	\$457,900	\$308,000

Design Barrier Length Per Height (FT)	0	0	0	707	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Cypress Ave and Sierra Ave
Station: 1833+00

Wall #: S1833

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1502

Location: WB Right of Way between Sierra Ave and Cedar Ave
Station: 1877+00.00

Cost Estimate for Barrier S1877 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		95	95	101	117	126	138	151	168	189	Varies
Total Pile Length (ft)		806	949	1163	1340	1514	1719	1965	2266	2642	1375
Pile cost (Drill & Cast)	\$50/LF	\$40,317.63	\$47,432.50	\$58,145.53	\$67,002.54	\$75,692.00	\$85,956.82	\$98,269.60	\$113,313.00	\$132,111.00	\$68,748.37
Sound Wall Area (SQFT)		12015	15018	18022	21026	24029	27033	30037	33040	36044	21629
Masonry Cost ²	\$17/SQFT	\$204,250.24	\$255,312.80	\$306,375.36	\$357,437.92	\$408,500.48	\$459,563.04	\$510,625.60	\$561,688.16	\$612,750.72	\$367,697.08
Pile Cap (CY)		146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0
Structure Conc. Cost	\$650/CY	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94	\$94,907.94
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0	146.0
Structure Excavation Cost	\$65/CY	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79	\$9,490.79
Remove Exist Wall Cost	\$17/LF	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00	\$1,700.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00	\$19,400.00
Wall Cost (Masonry)		\$370,066.60	\$428,244.04	\$490,019.63	\$549,939.20	\$609,691.22	\$671,018.60	\$734,393.94	\$800,499.90	\$870,360.46	\$561,944.19
Traffic Control	\$11/LF	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24	\$17,620.24
Contingencies (10%)		\$37,006.66	\$42,824.40	\$49,001.96	\$54,993.92	\$60,969.12	\$67,101.86	\$73,439.39	\$80,049.99	\$87,036.05	\$56,194.42
Total Wall Cost (Masonry)		\$424,693.50	\$488,688.68	\$556,641.84	\$622,553.36	\$688,280.58	\$755,740.70	\$825,453.57	\$898,170.13	\$975,016.74	\$635,758.85
Total Wall Cost (Masonry)		\$424,700	\$488,700	\$556,600	\$622,600	\$688,300	\$755,700	\$825,500	\$898,200	\$975,000	\$635,800

Design Barrier Length Per Height (FT)	0	0	0	1200	302	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Sierra Ave and Cedar Ave
Station: 1877+00

Wall #: S1877

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	3587

Location: WB Right of Way between Sierra Ave and Cedar Ave
Station: 1907+00.00

Cost Estimate for Barrier S1907 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		225	225	240	277	300	327	360	400	449	Varies
Total Pile Length (ft)		1914	2252	2762	3185	3599	4089	4676	5394	6292	3259
Pile cost (Drill & Cast)	\$50/LF	\$95,710.53	\$112,600.63	\$138,085.10	\$159,240.50	\$179,961.00	\$204,444.32	\$233,819.30	\$269,716.50	\$314,581.75	\$162,930.13
Sound Wall Area (SQFT)		28698	35872	43047	50221	57396	64570	71744	78919	86093	51529
Masonry Cost ²	\$17/SQFT	\$487,861.92	\$609,827.40	\$731,792.88	\$853,758.36	\$975,723.84	\$1,097,689.32	\$1,219,654.80	\$1,341,620.28	\$1,463,585.76	\$875,999.46
Pile Cap (CY)		348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8
Structure Conc. Cost	\$650/CY	\$226,692.38	\$226,692.38	\$226,692.38	\$226,692.38	\$226,692.38	\$226,692.38	\$226,692.38	\$226,692.38	\$226,692.38	\$226,692.38
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8	348.8
Structure Excavation Cost	\$65/CY	\$22,669.24	\$22,669.24	\$22,669.24	\$22,669.24	\$22,669.24	\$22,669.24	\$22,669.24	\$22,669.24	\$22,669.24	\$22,669.24
Remove Exist Wall Cost	\$17/LF	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00	\$17,510.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00	\$209,500.00
Wall Cost (Masonry)		\$1,059,944.06	\$1,198,799.64	\$1,346,249.59	\$1,489,370.47	\$1,632,056.45	\$1,778,505.25	\$1,929,845.71	\$2,087,708.39	\$2,254,539.12	\$1,515,301.20
Traffic Control	\$11/LF	\$40,559.42	\$40,559.42	\$40,559.42	\$40,559.42	\$40,559.42	\$40,559.42	\$40,559.42	\$40,559.42	\$40,559.42	\$40,559.42
Contingencies (10%)		\$105,994.41	\$119,879.96	\$134,624.96	\$148,937.05	\$163,205.65	\$177,850.53	\$192,984.57	\$208,770.84	\$225,453.91	\$151,530.12
Total Wall Cost (Masonry)		\$1,206,497.89	\$1,359,239.02	\$1,521,433.97	\$1,678,866.94	\$1,835,821.52	\$1,996,915.20	\$2,163,389.70	\$2,337,038.65	\$2,520,552.45	\$1,707,390.74
Total Wall Cost (Masonry)		\$1,206,000	\$1,359,000	\$1,521,000	\$1,679,000	\$1,836,000	\$1,997,000	\$2,163,000	\$2,337,000	\$2,521,000	\$1,707,000

Design Barrier Length Per Height (FT)	0	0	733	1467	1387	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Sierra Ave and Cedar Ave
Station: 1907+00

Wall #: S1907

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	Nothing
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	369

Location: WB Right of Way near WB I-10 Cedar Ave on-ramp
Station: 1969+00.00

Cost Estimate for Barrier S1969 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		24	24	26	29	32	35	38	42	47	Varies
Total Pile Length (ft)		205	241	294	338	381	432	493	567	660	294
Pile cost (Drill & Cast)	\$50/LF	\$10,226.30	\$12,030.94	\$14,719.62	\$16,895.71	\$19,049.50	\$21,590.34	\$24,634.35	\$28,349.25	\$32,986.63	\$14,719.62
Sound Wall Area (SQFT)		2952	3690	4428	5166	5904	6642	7380	8118	8856	4428
Masonry Cost ²	\$17/SQFT	\$50,182.64	\$62,728.30	\$75,273.96	\$87,819.62	\$100,365.28	\$112,910.94	\$125,456.60	\$138,002.26	\$150,547.92	\$75,273.96
Pile Cap (CY)		35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9
Structure Conc. Cost	\$650/CY	\$23,318.12	\$23,318.12	\$23,318.12	\$23,318.12	\$23,318.12	\$23,318.12	\$23,318.12	\$23,318.12	\$23,318.12	\$23,318.12
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9
Structure Excavation Cost	\$65/CY	\$2,331.81	\$2,331.81	\$2,331.81	\$2,331.81	\$2,331.81	\$2,331.81	\$2,331.81	\$2,331.81	\$2,331.81	\$2,331.81
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$86,058.87	\$100,409.17	\$115,643.51	\$130,365.26	\$145,064.71	\$160,151.21	\$175,740.88	\$192,001.44	\$209,184.47	\$115,643.51
Traffic Control	\$11/LF	\$5,158.89	\$5,158.89	\$5,158.89	\$5,158.89	\$5,158.89	\$5,158.89	\$5,158.89	\$5,158.89	\$5,158.89	\$5,158.89
Contingencies (10%)		\$8,605.89	\$10,040.92	\$11,564.35	\$13,036.53	\$14,506.47	\$16,015.12	\$17,574.09	\$19,200.14	\$20,918.45	\$11,564.35
Total Wall Cost (Masonry)		\$99,823.64	\$115,608.97	\$132,366.75	\$148,560.68	\$164,730.07	\$181,325.22	\$198,473.86	\$216,360.47	\$235,261.81	\$132,366.75
Total Wall Cost (Masonry)		\$99,820	\$115,600	\$132,400	\$148,600	\$164,700	\$181,300	\$198,500	\$216,400	\$235,300	\$132,400

Design Barrier Length Per Height (FT)	0	0	369	0	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way near WB I-10 Cedar Ave on-ramp
Station: 1969+00

Wall #: S1969

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Retaining wall
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	444

Location: WB Right of Way between Cedar Ave and Riverside Ave
Station: 2033+00.00

Cost Estimate for Barrier S2033 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		29	29	31	35	38	41	45	50	57	Varies
Total Pile Length (ft)		245	288	352	404	456	517	591	680	791	591
Pile cost (Drill & Cast)	\$50/LF	\$12,225.13	\$14,382.50	\$17,604.20	\$20,224.08	\$22,812.00	\$25,865.91	\$29,525.60	\$33,993.00	\$39,571.00	\$29,525.60
Sound Wall Area (SQFT)		3554	4442	5331	6219	7108	7996	8885	9773	10662	8885
Masonry Cost ²	\$17/SQFT	\$60,416.64	\$75,520.80	\$90,624.96	\$105,729.12	\$120,833.28	\$135,937.44	\$151,041.60	\$166,145.76	\$181,249.92	\$151,041.60
Pile Cap (CY)		43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Structure Conc. Cost	\$650/CY	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50	\$28,073.50
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Structure Excavation Cost	\$65/CY	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35	\$2,807.35
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00	\$27,600.00
Wall Cost (Masonry)		\$131,122.62	\$148,384.15	\$166,710.01	\$184,434.05	\$202,126.13	\$220,284.20	\$239,048.05	\$258,619.61	\$279,301.77	\$239,048.05
Traffic Control	\$11/LF	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64	\$5,986.64
Contingencies (10%)		\$13,112.26	\$14,838.42	\$16,671.00	\$18,443.40	\$20,212.61	\$22,028.42	\$23,904.81	\$25,861.96	\$27,930.18	\$23,904.81
Total Wall Cost (Masonry)		\$150,221.52	\$169,209.21	\$189,367.65	\$208,864.09	\$228,325.38	\$248,299.26	\$268,939.50	\$290,468.21	\$313,218.59	\$268,939.50
Total Wall Cost (Masonry)		\$150,200	\$169,200	\$189,400	\$208,900	\$228,300	\$248,300	\$268,900	\$290,500	\$313,200	\$268,900

Design Barrier Length Per Height (FT)	0	0	0	0	0	0	444	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Cedar Ave and Riverside Ave
Station: 2033+00

Wall #: S2033

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	851

Location: WB Right of Way between Riverside Ave and Pepper Ave
Station: 2076+00.00

Cost Estimate for Barrier S2079 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		54	54	58	66	72	78	86	96	107	Varies
Total Pile Length (ft)		461	542	664	764	863	980	1120	1290	1504	980
Pile cost (Drill & Cast)	\$50/LF	\$23,035.00	\$27,100.00	\$33,204.33	\$38,224.23	\$43,160.00	\$48,988.64	\$55,978.00	\$64,515.00	\$75,180.00	\$48,988.64
Sound Wall Area (SQFT)		6810	8512	10214	11917	13619	15322	17024	18726	20429	15322
Masonry Cost ²	\$17/SQFT	\$115,763.20	\$144,704.00	\$173,644.80	\$202,585.60	\$231,526.40	\$260,467.20	\$289,408.00	\$318,348.80	\$347,289.60	\$260,467.20
Pile Cap (CY)		82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8
Structure Conc. Cost	\$650/CY	\$53,791.11	\$53,791.11	\$53,791.11	\$53,791.11	\$53,791.11	\$53,791.11	\$53,791.11	\$53,791.11	\$53,791.11	\$53,791.11
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8
Structure Excavation Cost	\$65/CY	\$5,379.11	\$5,379.11	\$5,379.11	\$5,379.11	\$5,379.11	\$5,379.11	\$5,379.11	\$5,379.11	\$5,379.11	\$5,379.11
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$99,600.00	\$99,600.00	\$99,600.00	\$99,600.00	\$99,600.00	\$99,600.00	\$99,600.00	\$99,600.00	\$99,600.00	\$99,600.00
Wall Cost (Masonry)		\$297,568.42	\$330,574.22	\$365,619.36	\$399,580.05	\$433,456.62	\$468,226.06	\$504,156.22	\$541,634.02	\$581,239.82	\$468,226.06
Traffic Control	\$11/LF	\$10,463.20	\$10,463.20	\$10,463.20	\$10,463.20	\$10,463.20	\$10,463.20	\$10,463.20	\$10,463.20	\$10,463.20	\$10,463.20
Contingencies (10%)		\$29,756.84	\$33,057.42	\$36,561.94	\$39,958.01	\$43,345.66	\$46,822.61	\$50,415.62	\$54,163.40	\$58,123.98	\$46,822.61
Total Wall Cost (Masonry)		\$337,788.46	\$374,094.84	\$412,644.49	\$450,001.26	\$487,265.48	\$525,511.86	\$565,035.04	\$606,260.62	\$649,827.00	\$525,511.86
Total Wall Cost (Masonry)		\$337,800	\$374,100	\$412,600	\$450,000	\$487,300	\$525,500	\$565,000	\$606,300	\$649,800	\$525,500

Design Barrier Length Per Height (FT)	0	0	0	0	0	851	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Riverside Ave and Pepper Ave
Station: 2076+00

Wall #: S2079

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Fence
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1410

Location: WB Right of Way between Pepper Ave and Rancho Ave
Station: 2136+00.00

		Cost Estimate for Barrier S2145_14 (Alternative #3)									
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		7514	10334	13154	15973	18793	21613	24432	27252	30072	15973
Masonry Cost ²	\$17/SQFT	\$127,744.70	\$175,678.92	\$223,613.14	\$271,547.36	\$319,481.58	\$367,415.80	\$415,350.02	\$463,284.24	\$511,218.46	\$271,547.36
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$31,000.00	\$31,000.00	\$31,000.00	\$31,000.00	\$31,000.00	\$31,000.00	\$31,000.00	\$31,000.00	\$31,000.00	\$31,000.00
Wall Cost (Masonry)		\$158,744.70	\$206,678.92	\$254,613.14	\$302,547.36	\$350,481.58	\$398,415.80	\$446,350.02	\$494,284.24	\$542,218.46	\$302,547.36
Traffic Control	\$11/LF	\$16,608.13	\$16,608.13	\$16,608.13	\$16,608.13	\$16,608.13	\$16,608.13	\$16,608.13	\$16,608.13	\$16,608.13	\$16,608.13
Contingencies (10%)		\$15,874.47	\$20,667.89	\$25,461.31	\$30,254.74	\$35,048.16	\$39,841.58	\$44,635.00	\$49,428.42	\$54,221.85	\$30,254.74
Total Wall Cost (Masonry)		\$191,227.30	\$243,954.94	\$296,682.58	\$349,410.22	\$402,137.86	\$454,865.51	\$507,593.15	\$560,320.79	\$613,048.43	\$349,410.22
Total Wall Cost (Masonry)		\$191,200	\$244,000	\$296,700	\$349,400	\$402,100	\$454,900	\$507,600	\$560,300	\$613,000	\$349,400

Design Barrier Length Per Height (FT)	0	0	0	1410	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.
5. Wall S2145 cost includes tab S2145_14 and S2145_16

Location: WB Right of Way between Pepper Ave and Rancho Ave
Station: 2136+00

Wall #: S2145_14

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Fence
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	979

Location: WB Right of Way between Pepper Ave and Rancho Ave
Station: 2150+00.00

Cost Estimate for Barrier S2145_16 (Alternative #3)											
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		99	99	99	99	99	99	99	99	99	Varies
Total Pile Length (ft)		939	1038	1137	1236	1285	1384	1483	1582	1681	1285
Pile cost (Drill & Cast)	\$50/LF	\$46,956.60	\$51,899.40	\$56,842.20	\$61,785.00	\$64,256.40	\$69,199.20	\$74,142.00	\$79,084.80	\$84,027.60	\$64,256.40
Sound Wall Area (SQFT)		5216	7173	9130	11087	13044	15001	16958	18916	20873	13044
Masonry Cost ²	\$17/SQFT	\$88,667.32	\$121,938.36	\$155,209.40	\$188,480.44	\$221,751.48	\$255,022.52	\$288,293.56	\$321,564.60	\$354,835.64	\$221,751.48
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$88,070.40	\$88,070.40	\$88,070.40	\$88,070.40	\$88,070.40	\$88,070.40	\$88,070.40	\$88,070.40	\$88,070.40	\$88,070.40
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$223,694.32	\$261,908.16	\$300,122.00	\$338,335.84	\$374,078.28	\$412,292.12	\$450,505.96	\$488,719.80	\$526,933.64	\$374,078.28
Traffic Control	\$11/LF	\$11,864.16	\$11,864.16	\$11,864.16	\$11,864.16	\$11,864.16	\$11,864.16	\$11,864.16	\$11,864.16	\$11,864.16	\$11,864.16
Contingencies (10%)		\$22,369.43	\$26,190.82	\$30,012.20	\$33,833.58	\$37,407.83	\$41,229.21	\$45,050.60	\$48,871.98	\$52,693.36	\$37,407.83
Total Wall Cost (Masonry)		\$257,927.91	\$299,963.14	\$341,998.36	\$384,033.59	\$423,350.27	\$465,385.49	\$507,420.72	\$549,455.94	\$591,491.17	\$423,350.27
Total Wall Cost (Masonry)		\$257,900	\$300,000	\$342,000	\$384,000	\$423,400	\$465,400	\$507,400	\$549,500	\$591,500	\$423,400

Design Barrier Length Per Height (FT)	0	0	0	0	979	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
 2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
 3. No structure excavation associated with piling.
 4. Wall designs based on 2010 Caltrans Standard Plans.
 5. Wall S2145 cost includes tab S2145_14 and S2145_16
- Location: WB Right of Way between Pepper Ave and Rancho Ave
Station: 2150+00

Wall #: S2145 16

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	SW on BA on RTW
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1356

Location: WB Right of Way between Rancho Ave and 9th St
Station: 2163+00.00

Cost Estimate for Barrier SW5 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		7228	9941	12653	15365	18077	20790	23502	26214	28926	10236
Masonry Cost ²	\$17/SQFT	\$122,879.85	\$168,988.61	\$215,097.37	\$261,206.13	\$307,314.89	\$353,423.65	\$399,532.41	\$445,641.17	\$491,749.93	\$174,011.09
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$122,879.85	\$168,988.61	\$215,097.37	\$261,206.13	\$307,314.89	\$353,423.65	\$399,532.41	\$445,641.17	\$491,749.93	\$174,011.09
Traffic Control	\$11/LF	\$16,017.54	\$16,017.54	\$16,017.54	\$16,017.54	\$16,017.54	\$16,017.54	\$16,017.54	\$16,017.54	\$16,017.54	\$16,017.54
Contingencies (10%)		\$12,287.98	\$16,898.86	\$21,509.74	\$26,120.61	\$30,731.49	\$35,342.36	\$39,953.24	\$44,564.12	\$49,174.99	\$17,401.11
Total Wall Cost (Masonry)		\$151,185.37	\$201,905.01	\$252,624.64	\$303,344.28	\$354,063.91	\$404,783.55	\$455,503.19	\$506,222.82	\$556,942.46	\$207,429.73
Total Wall Cost (Masonry)		\$151,200	\$201,900	\$252,600	\$303,300	\$354,100	\$404,800	\$455,500	\$506,200	\$556,900	\$207,400

Design Barrier Length Per Height (FT) 118 973 265 0 0 0 0 0 0

Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Rancho Ave and 9th St
Station: 2163+00

Wall #: SW5

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	SW on piles
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1462

Location: WB Right of Way between Mount Vernon Ave and I-215
Station: 2231+00.00

Cost Estimate for Barrier S2238 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		147	147	147	147	147	147	147	147	147	Varies
Total Pile Length (ft)		1398	1545	1692	1839	1913	2060	2207	2355	2502	1865
Pile cost (Drill & Cast)	\$50/LF	\$69,900.53	\$77,258.48	\$84,616.43	\$91,974.38	\$95,653.35	\$103,011.30	\$110,369.25	\$117,727.20	\$125,085.15	\$93,250.92
Sound Wall Area (SQFT)		7790	10713	13637	16560	19483	22406	25329	28253	31176	17574
Masonry Cost ²	\$17/SQFT	\$132,434.67	\$182,128.73	\$231,822.79	\$281,516.85	\$331,210.91	\$380,904.97	\$430,599.03	\$480,293.09	\$529,987.15	\$298,759.95
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$131,543.10	\$131,543.10	\$131,543.10	\$131,543.10	\$131,543.10	\$131,543.10	\$131,543.10	\$131,543.10	\$131,543.10	\$131,543.10
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00	\$7,800.00
Wall Cost (Masonry)		\$341,678.29	\$398,730.30	\$455,782.31	\$512,834.32	\$566,207.36	\$623,259.37	\$680,311.38	\$737,363.39	\$794,415.40	\$531,353.97
Traffic Control	\$11/LF	\$17,177.49	\$17,177.49	\$17,177.49	\$17,177.49	\$17,177.49	\$17,177.49	\$17,177.49	\$17,177.49	\$17,177.49	\$17,177.49
Contingencies (10%)		\$34,167.83	\$39,873.03	\$45,578.23	\$51,283.43	\$56,620.74	\$62,325.94	\$68,031.14	\$73,736.34	\$79,441.54	\$53,135.40
Total Wall Cost (Masonry)		\$393,023.61	\$455,780.83	\$518,538.04	\$581,295.25	\$640,005.59	\$702,762.80	\$765,520.01	\$828,277.22	\$891,034.43	\$601,666.86
Total Wall Cost (Masonry)		\$393,000	\$455,800	\$518,500	\$581,300	\$640,000	\$702,800	\$765,500	\$828,300	\$891,000	\$601,700

Design Barrier Length Per Height (FT)	0	0	0	954	507	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Mount Vernon Ave and I-215
Station: 2231+00

Wall #: S2238

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	Retaining wall
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	837

Location: WB I-10 between Waterman Ave and Tippecanoe Ave
Station: 2382+00.00

Cost Estimate for Barrier S2382 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		85	85	85	85	85	85	85	85	85	Varies
Total Pile Length (ft)		805	890	974	1059	1101	1186	1271	1356	1440	974
Pile cost (Drill & Cast)	\$50/LF	\$40,245.80	\$44,482.20	\$48,718.60	\$52,955.00	\$55,073.20	\$59,309.60	\$63,546.00	\$67,782.40	\$72,018.80	\$48,718.60
Sound Wall Area (SQFT)		4463	6137	7812	9486	11161	12836	14510	16185	17859	7812
Masonry Cost ²	\$17/SQFT	\$75,865.94	\$104,333.46	\$132,800.98	\$161,268.50	\$189,736.02	\$218,203.54	\$246,671.06	\$275,138.58	\$303,606.10	\$132,800.98
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$75,355.20	\$75,355.20	\$75,355.20	\$75,355.20	\$75,355.20	\$75,355.20	\$75,355.20	\$75,355.20	\$75,355.20	\$75,355.20
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$191,466.94	\$224,170.86	\$256,874.78	\$289,578.70	\$320,164.42	\$352,868.34	\$385,572.26	\$418,276.18	\$450,980.10	\$256,874.78
Traffic Control	\$11/LF	\$10,310.08	\$10,310.08	\$10,310.08	\$10,310.08	\$10,310.08	\$10,310.08	\$10,310.08	\$10,310.08	\$10,310.08	\$10,310.08
Contingencies (10%)		\$19,146.69	\$22,417.09	\$25,687.48	\$28,957.87	\$32,016.44	\$35,286.83	\$38,557.23	\$41,827.62	\$45,098.01	\$25,687.48
Total Wall Cost (Masonry)		\$220,923.71	\$256,898.03	\$292,872.34	\$328,846.65	\$362,490.94	\$398,465.25	\$434,439.57	\$470,413.88	\$506,388.19	\$292,872.34
Total Wall Cost (Masonry)		\$220,900	\$256,900	\$292,900	\$328,800	\$362,500	\$398,500	\$434,400	\$470,400	\$506,400	\$292,900

Design Barrier Length Per Height (FT)	0	0	837	0	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 between Waterman Ave and Tippecanoe Ave
Station: 2382+00

Wall #: S2382

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Barrier
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	395

Location: EB Right of Way near EB I-10 Tippecanoe Ave off-ramp
Station: 2384+00.00

Cost Estimate for Barrier S2384 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		26	26	27	31	34	37	41	45	50	Varies
Total Pile Length (ft)		218	257	314	361	407	462	527	606	706	361
Pile cost (Drill & Cast)	\$50/LF	\$10,922.23	\$12,849.69	\$15,723.95	\$18,054.56	\$20,359.50	\$23,078.98	\$26,337.35	\$30,314.25	\$35,279.13	\$18,054.56
Sound Wall Area (SQFT)		3162	3952	4742	5533	6323	7113	7904	8694	9485	5533
Masonry Cost ²	\$17/SQFT	\$53,745.84	\$67,182.30	\$80,618.76	\$94,055.22	\$107,491.68	\$120,928.14	\$134,364.60	\$147,801.06	\$161,237.52	\$94,055.22
Pile Cap (CY)		38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4
Structure Conc. Cost	\$650/CY	\$24,973.81	\$24,973.81	\$24,973.81	\$24,973.81	\$24,973.81	\$24,973.81	\$24,973.81	\$24,973.81	\$24,973.81	\$24,973.81
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4
Structure Excavation Cost	\$65/CY	\$2,497.38	\$2,497.38	\$2,497.38	\$2,497.38	\$2,497.38	\$2,497.38	\$2,497.38	\$2,497.38	\$2,497.38	\$2,497.38
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$12,800.00	\$12,800.00	\$12,800.00	\$12,800.00	\$12,800.00	\$12,800.00	\$12,800.00	\$12,800.00	\$12,800.00	\$12,800.00
Wall Cost (Masonry)		\$104,939.27	\$120,303.18	\$136,613.90	\$152,380.97	\$168,122.37	\$184,278.31	\$200,973.14	\$218,386.50	\$236,787.84	\$152,380.97
Traffic Control	\$11/LF	\$5,447.09	\$5,447.09	\$5,447.09	\$5,447.09	\$5,447.09	\$5,447.09	\$5,447.09	\$5,447.09	\$5,447.09	\$5,447.09
Contingencies (10%)		\$10,493.93	\$12,030.32	\$13,661.39	\$15,238.10	\$16,812.24	\$18,427.83	\$20,097.31	\$21,838.65	\$23,678.78	\$15,238.10
Total Wall Cost (Masonry)		\$120,880.28	\$137,780.59	\$155,722.38	\$173,066.16	\$190,381.70	\$208,153.23	\$226,517.55	\$245,672.24	\$265,913.71	\$173,066.16
Total Wall Cost (Masonry)		\$120,900	\$137,800	\$155,700	\$173,100	\$190,400	\$208,200	\$226,500	\$245,700	\$265,900	\$173,100

Design Barrier Length Per Height (FT)

0	0	0	395	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB Right of Way near EB I-10 Tippecanoe Ave off-ramp
Station: 2384+00

Wall #: S2384

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1513

Location: EB Right of Way near EB I-10 Mountain Ave off-ramp
Station: 2427+00.00

Cost Estimate for Barrier S2434A (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		96	96	102	117	127	139	152	169	190	Varies
Total Pile Length (ft)		812	955	1171	1350	1525	1731	1979	2283	2661	1440
Pile cost (Drill & Cast)	\$50/LF	\$40,605.30	\$47,770.94	\$58,560.68	\$67,481.56	\$76,233.50	\$86,572.16	\$98,973.55	\$114,125.25	\$133,058.63	\$71,984.32
Sound Wall Area (SQFT)		12101	15127	18152	21177	24203	27228	30253	33279	36304	22734
Masonry Cost ²	\$17/SQFT	\$205,723.12	\$257,153.90	\$308,584.68	\$360,015.46	\$411,446.24	\$462,877.02	\$514,307.80	\$565,738.58	\$617,169.36	\$386,475.96
Pile Cap (CY)		147.1	147.1	147.1	147.1	147.1	147.1	147.1	147.1	147.1	147.1
Structure Conc. Cost	\$650/CY	\$95,592.34	\$95,592.34	\$95,592.34	\$95,592.34	\$95,592.34	\$95,592.34	\$95,592.34	\$95,592.34	\$95,592.34	\$95,592.34
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		147.1	147.1	147.1	147.1	147.1	147.1	147.1	147.1	147.1	147.1
Structure Excavation Cost	\$65/CY	\$9,559.23	\$9,559.23	\$9,559.23	\$9,559.23	\$9,559.23	\$9,559.23	\$9,559.23	\$9,559.23	\$9,559.23	\$9,559.23
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$94,300.00	\$94,300.00	\$94,300.00	\$94,300.00	\$94,300.00	\$94,300.00	\$94,300.00	\$94,300.00	\$94,300.00	\$94,300.00
Wall Cost (Masonry)		\$445,779.99	\$504,376.41	\$566,596.94	\$626,948.59	\$687,131.31	\$748,900.75	\$812,732.92	\$879,315.40	\$949,679.56	\$657,911.86
Traffic Control	\$11/LF	\$17,739.37	\$17,739.37	\$17,739.37	\$17,739.37	\$17,739.37	\$17,739.37	\$17,739.37	\$17,739.37	\$17,739.37	\$17,739.37
Contingencies (10%)		\$44,578.00	\$50,437.64	\$56,659.69	\$62,694.86	\$68,713.13	\$74,890.08	\$81,273.29	\$87,931.54	\$94,967.96	\$65,791.19
Total Wall Cost (Masonry)		\$508,097.36	\$572,553.42	\$640,996.00	\$707,382.82	\$773,583.82	\$841,530.20	\$911,745.59	\$984,986.31	\$1,062,386.89	\$741,442.41
Total Wall Cost (Masonry)		\$508,100	\$572,600	\$641,000	\$707,400	\$773,600	\$841,500	\$911,700	\$985,000	\$1,062,000	\$741,400

Design Barrier Length Per Height (FT)

0	0	0	734	778	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB Right of Way near EB I-10 Mountain Ave off-ramp
Station: 2427+00

Wall #: S2434A

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1394

Location: EB I-10 Mountain Ave off-ramp
Station: 2427+00.00

Cost Estimate for Barrier S2434B (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		88	88	94	108	117	128	140	156	175	Varies
Total Pile Length (ft)		749	881	1080	1245	1406	1597	1826	2105	2454	1146
Pile cost (Drill & Cast)	\$50/LF	\$37,460.30	\$44,070.94	\$54,022.02	\$62,244.63	\$70,313.50	\$79,844.89	\$91,277.55	\$105,245.25	\$122,698.63	\$57,313.40
Sound Wall Area (SQFT)		11154	13943	16731	19520	22308	25097	27885	30674	33462	17848
Masonry Cost ²	\$17/SQFT	\$189,620.72	\$237,025.90	\$284,431.08	\$331,836.26	\$379,241.44	\$426,646.62	\$474,051.80	\$521,456.98	\$568,862.16	\$303,414.98
Pile Cap (CY)		135.6	135.6	135.6	135.6	135.6	135.6	135.6	135.6	135.6	135.5
Structure Conc. Cost	\$650/CY	\$88,110.12	\$88,110.12	\$88,110.12	\$88,110.12	\$88,110.12	\$88,110.12	\$88,110.12	\$88,110.12	\$88,110.12	\$88,082.94
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		135.6	135.6	135.6	135.6	135.6	135.6	135.6	135.6	135.6	135.5
Structure Excavation Cost	\$65/CY	\$8,811.01	\$8,811.01	\$8,811.01	\$8,811.01	\$8,811.01	\$8,811.01	\$8,811.01	\$8,811.01	\$8,811.01	\$8,808.29
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$87,000.00	\$87,000.00	\$87,000.00	\$87,000.00	\$87,000.00	\$87,000.00	\$87,000.00	\$87,000.00	\$87,000.00	\$86,973.17
Wall Cost (Masonry)		\$411,002.15	\$465,017.97	\$522,374.23	\$578,002.02	\$633,476.07	\$690,412.64	\$749,250.48	\$810,623.36	\$875,481.91	\$544,592.79
Traffic Control	\$11/LF	\$16,436.97	\$16,436.97	\$16,436.97	\$16,436.97	\$16,436.97	\$16,436.97	\$16,436.97	\$16,436.97	\$16,436.97	\$16,431.90
Contingencies (10%)		\$41,100.21	\$46,501.80	\$52,237.42	\$57,800.20	\$63,347.61	\$69,041.26	\$74,925.05	\$81,062.34	\$87,548.19	\$54,459.28
Total Wall Cost (Masonry)		\$468,539.33	\$527,956.73	\$591,048.62	\$652,239.20	\$713,260.65	\$775,890.87	\$840,612.50	\$908,122.67	\$979,467.08	\$615,483.97
Total Wall Cost (Masonry)		\$468,500	\$528,000	\$591,000	\$652,200	\$713,300	\$775,900	\$840,600	\$908,100	\$979,500	\$615,500

Design Barrier Length Per Height (FT)

0

0

833

561

0

0

0

Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 Mountain Ave off-ramp
Station: 2427+00

Wall #: S2434B

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	971

Location: WB I-10 between Richardson St and Mountainview Ave
Station: 2432+00.00

		Cost Estimate for Barrier S2437 (Alternative #3)									
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		5176	7118	9060	11002	12944	14886	16828	18770	20712	11002
Masonry Cost ²	\$17/SQFT	\$87,986.84	\$121,002.54	\$154,018.24	\$187,033.94	\$220,049.64	\$253,065.34	\$286,081.04	\$319,096.74	\$352,112.44	\$187,033.94
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$87,986.84	\$121,002.54	\$154,018.24	\$187,033.94	\$220,049.64	\$253,065.34	\$286,081.04	\$319,096.74	\$352,112.44	\$187,033.94
Traffic Control	\$11/LF	\$11,781.55	\$11,781.55	\$11,781.55	\$11,781.55	\$11,781.55	\$11,781.55	\$11,781.55	\$11,781.55	\$11,781.55	\$11,781.55
Contingencies (10%)		\$8,798.68	\$12,100.25	\$15,401.82	\$18,703.39	\$22,004.96	\$25,306.53	\$28,608.10	\$31,909.67	\$35,211.24	\$18,703.39
Total Wall Cost (Masonry)		\$108,567.07	\$144,884.34	\$181,201.61	\$217,518.88	\$253,836.15	\$290,153.42	\$326,470.69	\$362,787.96	\$399,105.23	\$217,518.88
Total Wall Cost (Masonry)		\$108,600	\$144,900	\$181,200	\$217,500	\$253,800	\$290,200	\$326,500	\$362,800	\$399,100	\$217,500

Design Barrier Length Per Height (FT)	0	0	0	971	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 between Richardson St and Mountainview Ave
Station: 2432+00

Wall #: S2437

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Blockwall
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	469

Location: WB Right of Way near WB I-10 Mountain Ave on-ramp
Station: 2433+00.00

Cost Estimate for Barrier S2435 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		2500	3438	4375	5313	6251	7189	8127	9065	10003	5313
Masonry Cost ²	\$17/SQFT	\$42,493.37	\$58,438.35	\$74,383.33	\$90,328.31	\$106,273.29	\$122,218.27	\$138,163.25	\$154,108.23	\$170,053.21	\$90,328.31
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00	\$7,973.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$50,466.37	\$66,411.35	\$82,356.33	\$98,301.31	\$114,246.29	\$130,191.27	\$146,136.25	\$162,081.23	\$178,026.21	\$98,301.31
Traffic Control	\$11/LF	\$6,258.67	\$6,258.67	\$6,258.67	\$6,258.67	\$6,258.67	\$6,258.67	\$6,258.67	\$6,258.67	\$6,258.67	\$6,258.67
Contingencies (10%)		\$5,046.64	\$6,641.14	\$8,235.63	\$9,830.13	\$11,424.63	\$13,019.13	\$14,613.63	\$16,208.12	\$17,802.62	\$9,830.13
Total Wall Cost (Masonry)		\$61,771.68	\$79,311.16	\$96,850.63	\$114,390.11	\$131,929.59	\$149,469.07	\$167,008.55	\$184,548.02	\$202,087.50	\$114,390.11
Total Wall Cost (Masonry)		\$61,770	\$79,310	\$96,850	\$114,400	\$131,900	\$149,500	\$167,000	\$184,500	\$202,100	\$114,400

Design Barrier Length Per Height (FT)	0	0	0	469	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way near WB I-10 Mountain Ave on-ramp
Station: 2433+00

Wall #: S2435

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1201

Location: EB I-10 between Richardson St and Mountainview Ave
Station: 2437+50.00

		Cost Estimate for Barrier S2438 (Alternative #3)									
Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		6402	8804	11206	13608	16010	18412	20814	23216	25618	13608
Masonry Cost ²	\$17/SQFT	\$108,826.23	\$149,661.59	\$190,496.95	\$231,332.31	\$272,167.67	\$313,003.03	\$353,838.39	\$394,673.75	\$435,509.11	\$231,332.31
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$108,826.23	\$149,661.59	\$190,496.95	\$231,332.31	\$272,167.67	\$313,003.03	\$353,838.39	\$394,673.75	\$435,509.11	\$231,332.31
Traffic Control	\$11/LF	\$14,311.44	\$14,311.44	\$14,311.44	\$14,311.44	\$14,311.44	\$14,311.44	\$14,311.44	\$14,311.44	\$14,311.44	\$14,311.44
Contingencies (10%)		\$10,882.62	\$14,966.16	\$19,049.70	\$23,133.23	\$27,216.77	\$31,300.30	\$35,383.84	\$39,467.38	\$43,550.91	\$23,133.23
Total Wall Cost (Masonry)		\$134,020.30	\$178,939.19	\$223,858.09	\$268,776.99	\$313,695.88	\$358,614.78	\$403,533.67	\$448,452.57	\$493,371.47	\$268,776.99
Total Wall Cost (Masonry)		\$134,000	\$178,900	\$223,900	\$268,800	\$313,700	\$358,600	\$403,500	\$448,500	\$493,400	\$268,800

Design Barrier Length Per Height (FT)	0	0	0	1201	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Richardson St and Mountainview Ave
Station: 2437+50

Wall #: S2438

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	772

Location: EB I-10 between Richardson St and Mountainview Ave
Station: 2438+00.00

Cost Estimate for Barrier S2438B (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		4115	5659	7203	8747	10291	11835	13379	14924	16468	7203
Masonry Cost ²	\$17/SQFT	\$69,954.54	\$96,203.90	\$122,453.26	\$148,702.62	\$174,951.98	\$201,201.34	\$227,450.70	\$253,700.06	\$279,949.42	\$122,453.26
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$69,954.54	\$96,203.90	\$122,453.26	\$148,702.62	\$174,951.98	\$201,201.34	\$227,450.70	\$253,700.06	\$279,949.42	\$122,453.26
Traffic Control	\$11/LF	\$9,592.44	\$9,592.44	\$9,592.44	\$9,592.44	\$9,592.44	\$9,592.44	\$9,592.44	\$9,592.44	\$9,592.44	\$9,592.44
Contingencies (10%)		\$6,995.45	\$9,620.39	\$12,245.33	\$14,870.26	\$17,495.20	\$20,120.13	\$22,745.07	\$25,370.01	\$27,994.94	\$12,245.33
Total Wall Cost (Masonry)		\$86,542.44	\$115,416.73	\$144,291.03	\$173,165.33	\$202,039.62	\$230,913.92	\$259,788.21	\$288,662.51	\$317,536.81	\$144,291.03
Total Wall Cost (Masonry)		\$86,540	\$115,400	\$144,300	\$173,200	\$202,000	\$230,900	\$259,800	\$288,700	\$317,500	\$144,300

Design Barrier Length Per Height (FT)	0	0	772	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Richardson St and Mountainview Ave
Station: 2438+00

Wall #: S2438B

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on Barrier on retaining wall
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	
Friction angle	
Barrier depth H_e	
Wall Length (FT)	1957

Location: EB I-10 between Mountainview Ave and California St
Station: 2466+00.00

Cost Estimate for Barrier S2476 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)											
Pile Spacing (ft)											
# of Piles											
Total Pile Length (ft)											
Pile cost (Drill & Cast)	\$50/LF										
Sound Wall Area (SQFT)		10429	14342	18255	22169	26082	29995	33908	37822	41735	19769
Masonry Cost ²	\$17/SQFT	\$177,290.24	\$243,815.66	\$310,341.08	\$376,866.50	\$443,391.92	\$509,917.34	\$576,442.76	\$642,968.18	\$709,493.60	\$336,065.14
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$177,290.24	\$243,815.66	\$310,341.08	\$376,866.50	\$443,391.92	\$509,917.34	\$576,442.76	\$642,968.18	\$709,493.60	\$336,065.14
Traffic Control	\$11/LF	\$22,622.93	\$22,622.93	\$22,622.93	\$22,622.93	\$22,622.93	\$22,622.93	\$22,622.93	\$22,622.93	\$22,622.93	\$22,622.93
Contingencies (10%)		\$17,729.02	\$24,381.57	\$31,034.11	\$37,686.65	\$44,339.19	\$50,991.73	\$57,644.28	\$64,296.82	\$70,949.36	\$33,606.51
Total Wall Cost (Masonry)		\$217,642.20	\$290,820.16	\$363,998.12	\$437,176.08	\$510,354.05	\$583,532.01	\$656,709.97	\$729,887.93	\$803,065.89	\$392,294.59
Total Wall Cost (Masonry)		\$217,600	\$290,800	\$364,000	\$437,200	\$510,400	\$583,500	\$656,700	\$729,900	\$803,100	\$392,300

Design Barrier Length Per Height (FT)	0	0	1200	757	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Mountainview Ave and California St
Station: 2466+00

Wall #: S2476

I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 736S/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	2301

Location: WB I-10 Orange Ave on-ramp
Station: 2607+00.00

Cost Estimate for Barrier S2619 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		231	231	231	231	231	231	231	231	231	Varies
Total Pile Length (ft)		2195	2426	2657	2888	3004	3235	3466	3697	3928	2627
Pile cost (Drill & Cast)	\$50/LF	\$109,762.53	\$121,316.48	\$132,870.43	\$144,424.38	\$150,201.35	\$161,755.30	\$173,309.25	\$184,863.20	\$196,417.15	\$131,348.74
Sound Wall Area (SQFT)		12263	16865	21466	26068	30670	35271	39873	44474	49076	20860
Masonry Cost ²	\$17/SQFT	\$208,474.58	\$286,701.44	\$364,928.30	\$443,155.16	\$521,382.02	\$599,608.88	\$677,835.74	\$756,062.60	\$834,289.46	\$354,625.62
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00	\$450,000.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10	\$207,071.10
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$975,308.21	\$1,065,089.02	\$1,154,869.83	\$1,244,650.64	\$1,328,654.47	\$1,418,435.28	\$1,508,216.09	\$1,597,996.90	\$1,687,777.71	\$1,143,045.46
Traffic Control	\$11/LF	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69	\$26,408.69
Contingencies (10%)		\$97,530.82	\$106,508.90	\$115,486.98	\$124,465.06	\$132,865.45	\$141,843.53	\$150,821.61	\$159,799.69	\$168,777.77	\$114,304.55
Total Wall Cost (Masonry)		\$1,099,247.72	\$1,198,006.61	\$1,296,765.50	\$1,395,524.39	\$1,487,928.61	\$1,586,687.50	\$1,685,446.39	\$1,784,205.28	\$1,882,964.17	\$1,283,758.70
Total Wall Cost (Masonry)		\$1,099,000	\$1,198,000	\$1,297,000	\$1,396,000	\$1,488,000	\$1,587,000	\$1,685,000	\$1,784,000	\$1,883,000	\$1,284,000

Design Barrier Length Per Height (FT) 0 801 1002 498 0 0 0 0 0

Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 Orange Ave on-ramp
Station: 2607+00

Wall #: S2619

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1142

Location: EB I-10 between Orange Ave and Church St
Station: 2638+00.00

Cost Estimate for Barrier S2638A (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		115	115	115	115	115	115	115	115	115	Varies
Total Pile Length (ft)		1095	1210	1325	1440	1498	1613	1728	1843	1959	1325
Pile cost (Drill & Cast)	\$50/LF	\$54,725.70	\$60,486.30	\$66,246.90	\$72,007.50	\$74,887.80	\$80,648.40	\$86,409.00	\$92,169.60	\$97,930.20	\$66,246.90
Sound Wall Area (SQFT)		6087	8372	10656	12940	15224	17509	19793	22077	24361	10656
Masonry Cost ²	\$17/SQFT	\$103,487.49	\$142,319.57	\$181,151.65	\$219,983.73	\$258,815.81	\$297,647.89	\$336,479.97	\$375,312.05	\$414,144.13	\$181,151.65
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00	\$200,000.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80	\$102,790.80
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$461,003.99	\$505,596.67	\$550,189.35	\$594,782.03	\$636,494.41	\$681,087.09	\$725,679.77	\$770,272.45	\$814,865.13	\$550,189.35
Traffic Control	\$11/LF	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32	\$13,663.32
Contingencies (10%)		\$46,100.40	\$50,559.67	\$55,018.94	\$59,478.20	\$63,649.44	\$68,108.71	\$72,567.98	\$77,027.25	\$81,486.51	\$55,018.94
Total Wall Cost (Masonry)		\$520,767.71	\$569,819.66	\$618,871.61	\$667,923.56	\$713,807.17	\$762,859.12	\$811,911.07	\$860,963.02	\$910,014.97	\$618,871.61
Total Wall Cost (Masonry)		\$520,800	\$569,800	\$618,900	\$667,900	\$713,800	\$762,900	\$811,900	\$861,000	\$910,000	\$618,900

Design Barrier Length Per Height (FT)	0	0	1142	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Orange Ave and Church St
Station: 2638+00

Wall #: S2638A

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	418

Location: EB I-10 between Orange Ave and Church St
Station: 2638+10.00

Cost Estimate for Barrier S2638B (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		43	43	43	43	43	43	43	43	43	Varies
Total Pile Length (ft)		407	449	492	535	556	599	642	685	728	492
Pile cost (Drill & Cast)	\$50/LF	\$20,330.00	\$22,470.00	\$24,610.00	\$26,750.00	\$27,820.00	\$29,960.00	\$32,100.00	\$34,240.00	\$36,380.00	\$24,610.00
Sound Wall Area (SQFT)		2228	3064	3900	4736	5572	6408	7244	8080	8916	3900
Masonry Cost ²	\$17/SQFT	\$37,874.98	\$52,086.98	\$66,298.98	\$80,510.98	\$94,722.98	\$108,934.98	\$123,146.98	\$137,358.98	\$151,570.98	\$66,298.98
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00	\$37,620.00
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$95,824.98	\$112,176.98	\$128,528.98	\$144,880.98	\$160,162.98	\$176,514.98	\$192,866.98	\$209,218.98	\$225,570.98	\$128,528.98
Traffic Control	\$11/LF	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00	\$5,698.00
Contingencies (10%)		\$9,582.50	\$11,217.70	\$12,852.90	\$14,488.10	\$16,016.30	\$17,651.50	\$19,286.70	\$20,921.90	\$22,557.10	\$12,852.90
Total Wall Cost (Masonry)		\$111,105.48	\$129,092.68	\$147,079.88	\$165,067.08	\$181,877.28	\$199,864.48	\$217,851.68	\$235,838.88	\$253,826.08	\$147,079.88
Total Wall Cost (Masonry)		\$111,100	\$129,100	\$147,100	\$165,100	\$181,900	\$199,900	\$217,900	\$235,800	\$253,800	\$147,100

Design Barrier Length Per Height (FT)	0	0	418	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 between Orange Ave and Church St
Station: 2638+10

Wall #: S2638B

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	2798

Location: EB I-10 6th St on-ramp in City of Redlands
Station: 2654+00.00

Cost Estimate for Barrier S2654A (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		281	281	281	281	281	281	281	281	281	Varies
Total Pile Length (ft)		2667	2948	3229	3510	3650	3931	4212	4492	4773	3183
Pile cost (Drill & Cast)	\$50/LF	\$133,368.60	\$147,407.40	\$161,446.20	\$175,485.00	\$182,504.40	\$196,543.20	\$210,582.00	\$224,620.80	\$238,659.60	\$159,157.10
Sound Wall Area (SQFT)		14912	20508	26103	31699	37294	42890	48485	54081	59676	25191
Masonry Cost ²	\$17/SQFT	\$253,505.03	\$348,628.87	\$443,752.71	\$538,876.55	\$634,000.39	\$729,124.23	\$824,248.07	\$919,371.91	\$1,014,495.75	\$428,242.25
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40	\$251,798.40
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$1,038,672.03	\$1,147,834.67	\$1,256,997.31	\$1,366,159.95	\$1,468,303.19	\$1,577,465.83	\$1,686,628.47	\$1,795,791.11	\$1,904,953.75	\$1,239,197.75
Traffic Control	\$11/LF	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36	\$31,875.36
Contingencies (10%)		\$103,867.20	\$114,783.47	\$125,699.73	\$136,616.00	\$146,830.32	\$157,746.58	\$168,662.85	\$179,579.11	\$190,495.38	\$123,919.78
Total Wall Cost (Masonry)		\$1,174,414.60	\$1,294,493.50	\$1,414,572.40	\$1,534,651.31	\$1,647,008.87	\$1,767,087.78	\$1,887,166.68	\$2,007,245.58	\$2,127,324.49	\$1,394,992.89
Total Wall Cost (Masonry)		\$1,174,000	\$1,294,000	\$1,415,000	\$1,535,000	\$1,647,000	\$1,767,000	\$1,887,000	\$2,007,000	\$2,127,000	\$1,395,000

Design Barrier Length Per Height (FT)	0	456	2342	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 6th St on-ramp in City of Redlands
Station: 2654+00

Wall #: S2654A

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1898

Location: EB I-10 6th St on-ramp in City of Redlands
Station: 2654+10.00

Cost Estimate for Barrier S2654B (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		191	191	191	191	191	191	191	191	191	Varies
Total Pile Length (ft)		1813	2003	2194	2385	2480	2671	2862	3053	3244	2194
Pile cost (Drill & Cast)	\$50/LF	\$90,630.00	\$100,170.00	\$109,710.00	\$119,250.00	\$124,020.00	\$133,560.00	\$143,100.00	\$152,640.00	\$162,180.00	\$109,710.00
Sound Wall Area (SQFT)		10116	13912	17708	21504	25300	29096	32892	36688	40484	17708
Masonry Cost ²	\$17/SQFT	\$171,977.78	\$236,509.78	\$301,041.78	\$365,573.78	\$430,105.78	\$494,637.78	\$559,169.78	\$623,701.78	\$688,233.78	\$301,041.78
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00	\$170,820.00
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$433,427.78	\$507,499.78	\$581,571.78	\$655,643.78	\$724,945.78	\$799,017.78	\$873,089.78	\$947,161.78	\$1,021,233.78	\$581,571.78
Traffic Control	\$11/LF	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00	\$21,978.00
Contingencies (10%)		\$43,342.78	\$50,749.98	\$58,157.18	\$65,564.38	\$72,494.58	\$79,901.78	\$87,308.98	\$94,716.18	\$102,123.38	\$58,157.18
Total Wall Cost (Masonry)		\$498,748.56	\$580,227.76	\$661,706.96	\$743,186.16	\$819,418.36	\$900,897.56	\$982,376.76	\$1,063,855.96	\$1,145,335.16	\$661,706.96
Total Wall Cost (Masonry)		\$498,700	\$580,200	\$661,700	\$743,200	\$819,400	\$900,900	\$982,400	\$1,064,000	\$1,145,000	\$661,700

Design Barrier Length Per Height (FT)	0	0	1898	0	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB I-10 6th St on-ramp in City of Redlands
Station: 2654+10

Wall #: S2654B

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	736

Location: EB Right of Way between Highland Ave and Ford St
Station: 2727+00.00

Cost Estimate for Barrier S2730 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		47	47	50	58	62	68	75	83	93	Varies
Total Pile Length (ft)		400	470	576	663	748	849	970	1118	1302	879
Pile cost (Drill & Cast)	\$50/LF	\$19,981.38	\$23,507.50	\$28,797.53	\$33,139.46	\$37,412.00	\$42,456.82	\$48,505.60	\$55,893.00	\$65,121.00	\$43,925.50
Sound Wall Area (SQFT)		5890	7362	8835	10307	11780	13252	14725	16197	17670	13445
Masonry Cost ²	\$17/SQFT	\$100,128.64	\$125,160.80	\$150,192.96	\$175,225.12	\$200,257.28	\$225,289.44	\$250,321.60	\$275,353.76	\$300,385.92	\$228,570.10
Pile Cap (CY)		71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
Structure Conc. Cost	\$650/CY	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28	\$46,526.28
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
Structure Excavation Cost	\$65/CY	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63	\$4,652.63
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type 5V)	\$135/LF										
Temporary & Access Easement		\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00
Wall Cost (Masonry)		\$190,288.92	\$218,847.21	\$249,169.40	\$278,543.49	\$307,848.19	\$337,925.16	\$369,006.11	\$401,425.67	\$435,685.83	\$342,674.51
Traffic Control	\$11/LF	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64	\$9,198.64
Contingencies (10%)		\$19,028.89	\$21,884.72	\$24,916.94	\$27,854.35	\$30,784.82	\$33,792.52	\$36,900.61	\$40,142.57	\$43,568.58	\$34,267.45
Total Wall Cost (Masonry)		\$218,516.45	\$249,930.57	\$283,284.98	\$315,596.48	\$347,831.64	\$380,916.32	\$415,105.36	\$450,766.87	\$488,453.05	\$386,140.60
Total Wall Cost (Masonry)		\$218,500	\$249,900	\$283,300	\$315,600	\$347,800	\$380,900	\$415,100	\$450,800	\$488,500	\$386,100

Design Barrier Length Per Height (FT)

0

0

47

72

89

61

46

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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: EB Right of Way between Highland Ave and Ford St
Station: 2727+00

Wall #: S2730

**I-10 Corridor Soundwall Cost Estimate
Alternative 3 - Express Lanes**

Existing Condition	Fence
Proposed Wall type	Sound wall on piles
Sound Wall type	Sound wall masonry block on pile cap
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	2043

Location: WB Right of Way between Highland Ave and Ford St
Station: 2728+00.00

Cost Estimate for Barrier S2737 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		8.5	10	11.5	11.5	12	12.5	13	13.5	14	Varies
Pile Spacing (ft)		16	16	15	13	12	11	10	9	8	Varies
# of Piles		129	129	137	158	171	187	205	228	256	Varies
Total Pile Length (ft)		1094	1287	1578	1819	2055	2335	2670	3079	3590	2650
Pile cost (Drill & Cast)	\$50/LF	\$54,704.94	\$64,358.75	\$78,908.40	\$90,959.69	\$102,774.00	\$116,731.82	\$133,476.20	\$153,936.00	\$179,504.50	\$132,480.68
Sound Wall Area (SQFT)		16348	20435	24522	28609	32696	36783	40870	44957	49044	39510
Masonry Cost ²	\$17/SQFT	\$277,913.28	\$347,391.60	\$416,869.92	\$486,348.24	\$555,826.56	\$625,304.88	\$694,783.20	\$764,261.52	\$833,739.84	\$671,663.54
Pile Cap (CY)		198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7
Structure Conc. Cost	\$650/CY	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58	\$129,136.58
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)		198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7	198.7
Structure Excavation Cost	\$65/CY	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66	\$12,913.66
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF										
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00	\$49,000.00
Wall Cost (Masonry)		\$523,668.46	\$602,800.59	\$686,828.56	\$768,358.17	\$849,650.80	\$933,086.94	\$1,019,309.64	\$1,109,247.76	\$1,204,294.58	\$995,194.46
Traffic Control	\$11/LF	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28	\$23,578.28
Contingencies (10%)		\$52,366.85	\$60,280.06	\$68,682.86	\$76,835.82	\$84,965.08	\$93,308.69	\$101,930.96	\$110,924.78	\$120,429.46	\$99,519.45
Total Wall Cost (Masonry)		\$599,613.59	\$686,658.93	\$779,089.70	\$868,772.27	\$958,194.16	\$1,049,973.91	\$1,144,818.89	\$1,243,750.82	\$1,348,302.32	\$1,118,292.19
Total Wall Cost (Masonry)		\$599,600	\$686,700	\$779,100	\$868,800	\$958,200	\$1,050,000	\$1,145,000	\$1,244,000	\$1,348,000	\$1,118,000

Design Barrier Length Per Height (FT)	0	0	0	0	959	62	86	574	363
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB Right of Way between Highland Ave and Ford St
Station: 2728+00

Wall #: S2737

I-10 Corridor Soundwall Cost Estimate Alternative 3 - Express Lanes

Existing Condition	Nothing
Proposed Wall type	Sound wall on BA on piles
Sound Wall type	Sound wall masonry block on type 7365/SV barrier
Wall type case(1/2)	Case 1
Friction angle	25
Barrier depth H_e	
Wall Length (FT)	1424

Location: WB I-10 edge of shoulder between Ford Ave and Devonshire Dr
Station: 2757+00.00

Cost Estimate for Barrier S2765 (Alternative #3)

Items	Unit Cost	Barrier Height, ft									Design Barrier
		8	10	12	14	16	18	20	22	24	
Pile Length (ft)		9.5	10.5	11.5	12.5	13	14	15	16	17	Varies
Pile Spacing (ft)		10	10	10	10	10	10	10	10	10	Varies
# of Piles		143	143	143	143	143	143	143	143	143	Varies
Total Pile Length (ft)		1362	1505	1649	1792	1864	2007	2150	2294	2437	1792
Pile cost (Drill & Cast)	\$50/LF	\$68,097.43	\$75,265.58	\$82,433.73	\$89,601.88	\$93,185.95	\$100,354.10	\$107,522.25	\$114,690.40	\$121,858.55	\$89,601.88
Sound Wall Area (SQFT)		7588	10435	13282	16130	18977	21824	24672	27519	30366	16130
Masonry Cost ²	\$17/SQFT	\$128,995.11	\$177,398.53	\$225,801.95	\$274,205.37	\$322,608.79	\$371,012.21	\$419,415.63	\$467,819.05	\$516,222.47	\$274,205.37
Pile Cap (CY)											
Structure Conc. Cost	\$650/CY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bridge		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Structure Excavation (CY)											
Structure Excavation Cost	\$65/CY										
Remove Exist Wall Cost	\$17/LF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Remove Exist Retaining Wall Cost	\$40/LF										
Retaining Wall Area (SQFT)											
Retaining Wall Cost	\$100/SQFT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Barrier (Type 736S)	\$90/LF	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70	\$128,126.70
Barrier (Type SV)	\$135/LF										
Temporary & Access Easement		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wall Cost (Masonry)		\$325,219.24	\$380,790.81	\$436,362.38	\$491,933.95	\$543,921.44	\$599,493.01	\$655,064.58	\$710,636.15	\$766,207.72	\$491,933.95
Traffic Control	\$11/LF	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93	\$16,759.93
Contingencies (10%)		\$32,521.92	\$38,079.08	\$43,636.24	\$49,193.39	\$54,392.14	\$59,949.30	\$65,506.46	\$71,063.62	\$76,620.77	\$49,193.39
Total Wall Cost (Masonry)		\$374,501.09	\$435,629.82	\$496,758.55	\$557,887.27	\$615,073.52	\$676,202.25	\$737,330.97	\$798,459.70	\$859,588.43	\$557,887.27
Total Wall Cost (Masonry)		\$374,500	\$435,600	\$496,800	\$557,900	\$615,100	\$676,200	\$737,300	\$798,500	\$859,600	\$557,900

Design Barrier Length Per Height (FT)	0	0	0	1424	0	0	0	0	0
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Notes:

1. Estimates are based on Caltrans Database cost for 2012-2014.
2. Includes cost for masonry, steel, cell fill material, scaffolding, and mobilization.
3. No structure excavation associated with piling.
4. Wall designs based on 2010 Caltrans Standard Plans.

Location: WB I-10 edge of shoulder between Ford Ave and Devonshire Dr
Station: 2757+00

Wall #: S2765

*I-10 Corridor Project
EA 0C2500, PN 0800000040
07-LA-10 PM 44.9/48.3
08-SBd-10 PM 0.0/R37.0
Program Code 400.010/HB5*

This Noise Barrier Cost Estimate has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein.

David Ovadia

David Ovadia
Registered Civil Engineer
Parsons

6/24/15
Date

